4-148-374-**22**(1)

SONY

Blu-ray Disc™

Blu-ray Disc / DVD Player

Operating Instructions

BDP-CX7000ES

http://www.sony.net/

4-148-374-**22**(1)

Printed in Malaysia

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WARNING

To reduce the risk of fire or electric shock, do not expose this apparatus to dripping or splashing, and do not place objects filled with liquids, such as vases, on the apparatus.

To reduce the risk of fire, do not cover the ventilation opening of the apparatus with newspapers, tablecloths, curtains, etc. Do not place the naked flame sources such as lighted candles on the apparatus.

As the main plug is used to disconnect the unit from the mains, connect the unit to an easily accessible AC outlet. Should you notice an abnormality in the unit, disconnect the main plug from the AC outlet immediately.

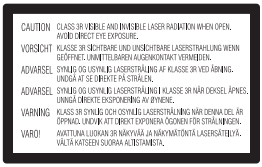
Do not install the appliance in a confined space, such as a bookcase or build-in cabinet.

Do not expose batteries or apparatus with battery-installed to excessive heat such as sunshine, fire or the like.

The unit is not disconnected from the mains as long as it is connected to the AC outlet, even if the unit itself has been turned off.

CAUTION

The use of optical instruments with this product will increase eye hazard. As the laser beam used in this Blu-ray Disc/DVD player is harmful to eyes, do not attempt to disassemble the cabinet.
Refer servicing to qualified personnel only.


CAUTION CLASS 3R VISIBLE AND INVISIBLE LASER RADIATION WHEN OPEN. AVOID DIRECT EYE EXPOSURE.
VORSICHT KLASSE 3R SICHTBARE UND UNSICHTBARE LASERSTRAHLUNG WENN GEÖFFNET. UNMITTELBAREN AUGENKONTAKT VERMEIDEN.
ADVARSEL SYNLIG OG USYNLIG LASERSTRÅLING AF KLASSE 3R VED ÅBNING. UNDGÅ AT SE DIREKTE PÅ STRÅLEN.
ADVARSEL SYNLIG OG USYNLIG LASERSTRÅLING I KLASSE 3R NÅR DEKSEL ÅPNES. UNNGÅ DIREKTE EKSPONERING AV ØYNENE.
VARNING KLASS 3R SYNLIG OCH OSYNLIG LASERSTRÅLNING NÄR DENNA DEL ÄR ÖPPNAD. UNDVIK ATT DIREKT EXPONERA ÖGONEN FÖR STRÅLNINGEN.
VARO! AVATTUNA LUOKAN 3R NÄKYVÄÄ JA NÄKYMÄTÖNTÄ LASERSÄTEILYÄ. VÄLTÄ KATSEEN SUORAA ALTISTAMISTA.

This appliance is classified as a CLASS 3R LASER product. Visible and invisible laser radiation is emitted when the laser protective housing is opened, so be sure to avoid direct eye exposure.

This label is located on the laser protective housing inside the enclosure.

This appliance is classified as a CLASS1 LASER product. This marking is located on the rear exterior.

Notice for customers: the following information is only applicable to equipment sold in countries applying EU directives.

The manufacturer of this product is Sony Corporation, 1-7-1 Konan Minato-ku Tokyo, 108-0075 Japan. The Authorized Representative for EMC and product safety is Sony Deutschland GmbH, Hedelfinger Strasse 61, 70327 Stuttgart, Germany. For any service or guarantee matters, please refer to the addresses given in separate service or guarantee documents.

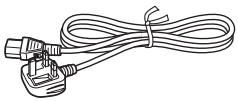
For the customers in the UK, Ireland, Malta, and Cyprus

Use the mains lead (AC power cord) set (Ⓐ).
For safety reasons, the mains lead (AC power cord) set (Ⓑ) is not intended for above mentioned countries/regions and shall therefore not be used there.

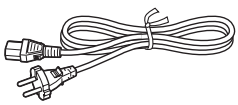
For the customers in the following regions

For all other countries part of the European Economic Area use the mains lead (AC power cord) set (Ⓑ).

Ⓐ



Ⓑ



About the mains lead (AC power cord)

The supplied mains lead (AC power cord) is only for use with this unit (BDP-CX7000ES). Do not use with other components.

This equipment has been tested and found to comply with the limits set out in the EMC Directive using a connection cable shorter than 3 metres.

Precautions

- To avoid electrical shock, do not open the cabinet. Refer servicing to qualified personnel only.
- Keep the external memory away from children. If swallowed, promptly see a doctor.

Disposal of Old Electrical & Electronic Equipment (Applicable in the European Union and other European countries with separate collection systems)

This symbol on the product or on its packaging indicates that this product shall not be treated as household waste. Instead it shall be handed over to the applicable collection point for the recycling of electrical and electronic equipment. By ensuring this product is disposed of correctly, you will help prevent potential negative consequences for the environment and human health, which could otherwise be caused by inappropriate waste handling of this product. The recycling of materials will help to conserve natural resources. For more detailed information about recycling of this product, please contact your local Civic Office, your household waste disposal service or the shop where you purchased the product.

Disposal of waste batteries (applicable in the European Union and other European countries with separate collection systems)

This symbol on the battery or on the packaging indicates that the battery provided with this product shall not be treated as household waste.

On certain batteries this symbol might be used in combination with a chemical symbol. The chemical symbols for mercury (Hg) or lead (Pb) are added if the battery contains more than 0.0005% mercury or 0.004% lead.

By ensuring these batteries are disposed of correctly, you will help prevent potentially negative consequences for the environment and human health which could otherwise be caused by inappropriate waste handling of the battery. The recycling of the materials will help to conserve natural resources.

In case of products that for safety, performance or data integrity reasons require a permanent connection with an incorporated battery, this battery should be replaced by qualified service staff only.

To ensure that the battery will be treated properly, hand over the product at end-of-life to the applicable collection point for the recycling of electrical and electronic equipment.

For all other batteries, please view the section on how to remove the battery from the product safely. Hand the battery over to the applicable collection point for the recycling of waste batteries.

For more detailed information about recycling of this product or battery, please contact your local Civic Office, your household waste disposal service or the shop where you purchased the product.

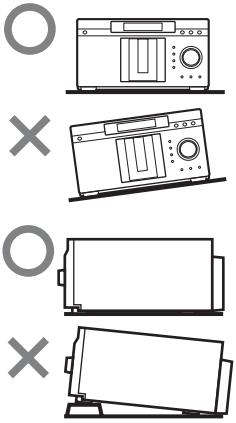
Precautions

On safety

- To prevent fire or shock hazard, do not place objects filled with liquids, such as vases, on the player, or place the player near water, such as near a bathtub or shower room. Should any solid object or liquid fall into the cabinet, unplug the player and have it checked by qualified personnel before operating it any further.
- Do not touch the mains lead (AC power cord) with wet hands. Doing so may cause an electric shock.

On placement

- Place the player in a location with adequate ventilation to prevent heat build-up in the player.
- Do not place the player on a soft surface such as a rug that might block the ventilation holes.
- Do not place the player in a location near heat sources, or in a place subject to direct sunlight, excessive dust, or mechanical shock.
- If the player is brought directly from a cold to a warm location, or is placed in a very damp room, moisture may condense on the lenses inside the player. Should this occur, the player may not operate properly. In this case, remove the disc and leave the player turned on for about half an hour until the moisture evaporates.
- Keep the player and the discs away from equipment with strong magnets, such as microwave ovens, or large loudspeakers.
- Do not place heavy or unstable objects on the player.
- Do not install the player in an inclined position. It is designed to be operated in a horizontal position only.



- Do not place any objects other than discs on the disc tray. Doing so may cause damage to the player or the object.
- When you move the player, take out any discs. If you don't, the disc may be damaged.
- When you move the player, disconnect the mains lead (AC power cord) and all other cables from the player.

On transporting the player

Before transporting the player, follow the procedure below to return the internal mechanisms to their original positions.

1) Remove all the discs from the disc slots.
2) Press OPEN/CLOSE to close the front cover.
   Make sure that "NO DISC" appears on the front panel display.
3) Wait for 10 seconds, then press I/⏻ to turn off the player.
   The player enters standby mode.
4) Disconnect the mains lead (AC power cord).

On power sources

- If you are not going to use the player for a long time, be sure to disconnect the player from the wall outlet (mains). To disconnect the mains lead (AC power cord), grasp the plug itself; never pull the cord.
- Observe following points to prevent the mains lead (AC power cord) being damaged. Do not use the mains lead (AC power cord) if it is damaged, as doing so may result in an electric shock or fire.
  – Do not pinch the mains lead (AC power cord) between the player and wall, shelf, etc.
  – Do not put anything heavy on the mains lead (AC power cord) or pull on the mains lead (AC power cord) itself.

On adjusting volume

Do not turn up the volume while listening to a section with very low level inputs or no audio signals. If you do, the speakers may be damaged when a peak level section is played.

On cleaning

Clean the cabinet, panel, and controls with a soft cloth slightly moistened with a mild detergent solution. Do not use any type of abrasive pad, scouring powder or solvent such as alcohol or benzine.

On cleaning discs, disc/lens cleaners

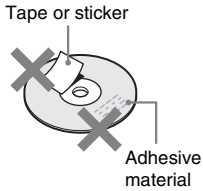
Do not use cleaning discs or disc/lens cleaners (including wet or spray types). These may cause the apparatus to malfunction.

On replacement of parts

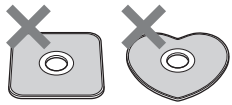
In the events that this player is repaired, repaired parts may be collected for reuse or recycling purposes.

Notes about the discs

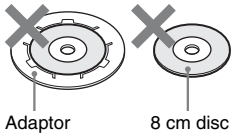
- **Do not use the following discs.**
  – A disc with a label or sticker on it.
  – A disc that has cellophane tape or sticker adhesive on it.



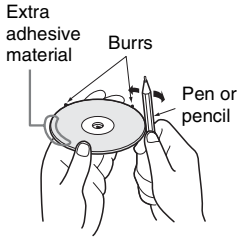
  – A disc that has a non-standard shape (e.g., card, heart).



  – 8 cm (3-inch) disc adaptor. The player cannot play an 8 cm disc. Do not insert an 8 cm (3-inch) disc or an 8 cm (3-inch) disc adaptor. It may damage the player and disc.



  – A lens cleaning disc.
- If you have printed the disc's label, dry the label before playing.
- If burrs or adhesive material attach on the disc, the player may work unstably. In order to ensure stable operation, insert a disc after removing burrs or foreign objects. Burrs may be removed by rubbing the edge of the disc with the side of a pen or pencil. If a disc does not play, check for burrs on the disc and its two adjacent discs.



- Do not insert discs other than those described in "Playable Discs" (page 86). Inserting a disc in a format not compatible may cause a malfunction.

To ensure stable operation

- To keep the disc clean, handle the disc by its edge. Do not touch the surface.
  Be careful not to leave fingerprints especially on Blu-ray Discs.
  Dust, fingerprints, or scratches on the disc may cause it to malfunction.

- Clean the disc with a cleaning cloth. Wipe the disc from the centre out.

- Do not resurface the playing side of a disc to remove surface scratches.
- Do not use solvents such as benzine, thinner, commercially available disc/lens cleaners, or anti-static spray intended for vinyl LPs.
- Do not expose the disc to direct sunlight or heat sources such as hot air ducts, or leave it in a car parked in direct sunlight as the temperature may rise considerably inside the car.
- After removing a disc from the disc slot, store the disc in its case.

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IMPORTANT NOTICE

Caution: This player is capable of holding a still video image or on-screen display image on your television screen indefinitely. If you leave the still video image or on-screen display image displayed on your TV for an extended period of time you risk permanent damage to your television screen. Plasma display panel televisions and projection televisions are susceptible to this.

If you have any questions or problems concerning your player, please consult your nearest Sony dealer.

About This Manual

- In this manual, “disc” is used as a general reference for BDs, DVDs, or CDs unless otherwise specified by the text or illustrations.
- Icons, such as BD, listed at the top of each explanation indicate what kind of media can be used with the function being explained.
  For details, see “Playable Discs” (page 86).
- Instructions in this manual describe the controls on the remote. You can also use the controls on the player if they have the similar symbols as those on the remote.
- The on-screen display illustrations used in this manual may not match the graphics displayed on your TV screen.
- NEED-to-know information (to prevent incorrect operation) is listed under the icon. NICE-to-know information (tips and other useful information) is listed under the icon.

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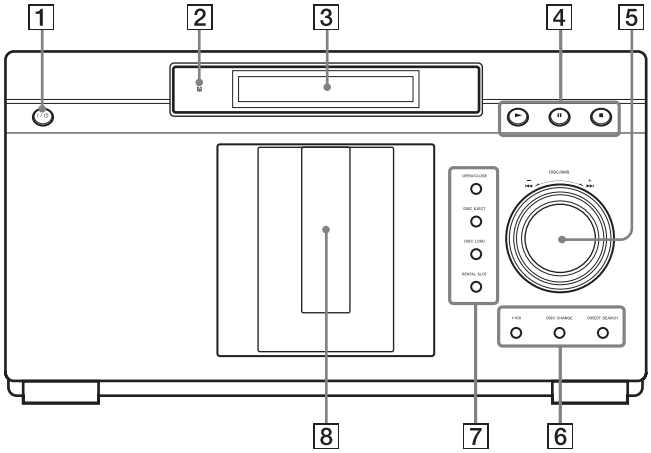
Before operating the player, please read “Terms and Conditions of Use and End User License Agreement” (page 92).

Guide to Parts and Controls

For more information, see the pages in parentheses.

Front panel



1 **I/⏻ (on/standby) (page 31)**
Turns on the player, or sets to standby mode.

2 **Remote sensor (page 31)**

3 **Front panel display (page 10)**

4 **► (play) (page 37)**
Starts playback.

II (pause) (page 37)
Pauses playback.

■ (stop) (page 37)
Stops playback.

5 **DISC/AMS dial (page 34)**
Selects a disc in DISC CHANGE mode.
Searches for a chapter/track/scene in DIRECT SEARCH mode.
The selected mode indicator is lit in the front panel display.

6 **+100 (page 34)**
Skips 100 disc slots ahead when selecting discs.

DISC CHANGE
Switches to the dial function for selecting the disc.

DIRECT SEARCH
Switches to the dial function for searching for a chapter/track.

7 **OPEN/CLOSE (page 34)**
Opens or closes the front cover.

DISC EJECT (page 34)
Opens the front cover and ejects the disc.

DISC LOAD (page 36)
Reads the disc information of all unknown discs, and loads it into the memory.

RENTAL SLOT (page 35)
Opens or closes the front cover to play a disc in slot number 1.

8 **Front cover**
Opens or closes when you insert or eject discs.

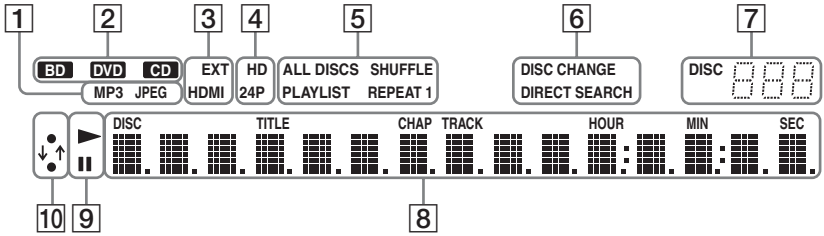
➡*continued*

To lock the front cover (Child Lock)

You can lock the front cover to prevent it being opened by mistake.
When the player is turned on, hold down ❚❚ on the player for more than 10 seconds until "LOCKED" appears in the front panel display. The front cover is locked.

To unlock the front cover, hold down ❚❚ on the player until "UNLOCK" appears in the front panel display.

Front panel display



1 File format
Displays the format of the currently playing file.

2 Disc type
Displays the currently playing disc type.

3 EXT (page 28)
Lights up when the external memory is recognised.

HDMI (page 19)
Lights up when an HDMI device is connected.

4 HD (page 66)
Lights up when outputting 720p/1080i/1080p video signals from the HDMI OUT jack or 720p/1080i video signals from the COMPONENT VIDEO OUT jacks.

24P (page 67)
Lights up when outputting 1080p/24 Hz video signals of BD-ROMs.

5 Play mode
Displays a currently playing play mode.

6 DISC CHANGE/DIRECT SEARCH
Displays either selected function mode for the dial.

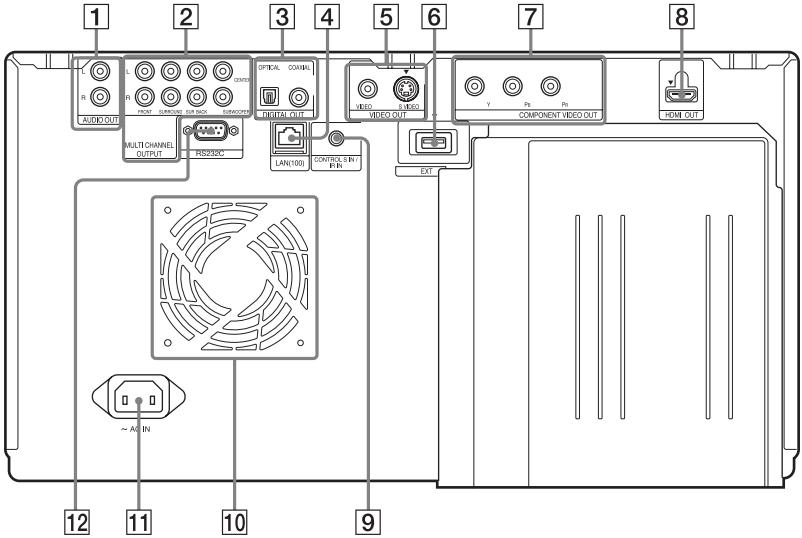
7 Disc slot number
Displays the number of the disc slot currently selected or playing back.

8 Playback information (page 13)
Displays the disc/title/chapter/track number.

9 ►, ❚❚
Lights up during playback or pause.

10 Network connection indicator
Lights up when downloading the player's software.
For details on downloading the player's software, see page 64.

Rear panel



1 **AUDIO OUT (L/R) jacks (page 22, 27)**

2 **MULTI CHANNEL OUTPUT (FRONT L/R, SURROUND L/R, SUR BACK L/R, CENTER, SUB WOOFER) jacks (page 26)**

3 **DIGITAL OUT (OPTICAL/ COAXIAL) jacks (page 25)**

4 **LAN (100) terminal (page 29)**

5 **VIDEO OUT (VIDEO / S VIDEO) jacks (page 22)**

6 **EXT slot (page 28)**

7 **COMPONENT VIDEO OUT (Y/P_B/P_R) jacks (page 21)**

8 **HDMI OUT jack (page 19, 24)**

9 **CONTROL S IN / IR IN jack**
If you have a CONTROL S-compatible Sony TV or AV amplifier (receiver), use a Control S cable (not supplied) to connect to the Control S (output) jack. Refer to the operating instructions supplied with your TV or AV amplifier (receiver).

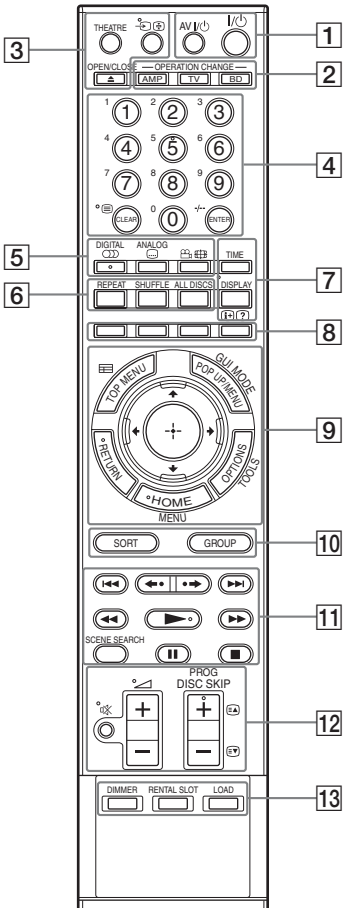
10 **Ventilation holes**
The ventilation fan is inside the player.

11 **AC IN terminal (page 30)**

12 **RS232C port**
Used for maintenance and service, or communication with external equipment.

➡*continued*

Remote



The number 5, ◯◯◯/DIGITAL, PROG +, and ► buttons have a tactile dot. Use the tactile dot as a reference when operating the player.

Button functions differ depending on the mode selected by the OPERATION CHANGE buttons. BD, TV, and AMP indicate the functions available for each operation mode.

The available functions of the remote differ depending on the disc or the situation.

1 AV I/⏻ (on/standby) (page 59)

TV AMP Turns on the connected TV or AV amplifier, or sets to standby mode.

I/⏻ (on/standby) (page 31)

BD Turns on the player, or sets to standby mode.

2 OPERATION CHANGE (page 58)

Changes the operation mode to control the component by the remote.
BD Operates the player.
TV Operates a connected TV.
AMP Operates a connected AV amplifier.

3 ⏏ OPEN/CLOSE (page 34)

BD Opens or closes the front cover.

⮆/⊕ (TV input)

TV AMP Switches between TV and other input sources.
After pressing ☰, you can hold the current text page.

THEATRE (page 56)

TV Automatically switches to the optimum video mode for watching movies.

The THEATRE button functions only when a Theatre Mode-compatible TV is connected.

4 Number buttons (page 39, 41, 60, 73, 74, 75)

BD TV AMP
Enters the title/chapter numbers, etc.

ENTER (page 39, 41, 60, 62)/-/--

BD Enters a selected item.
TV Selects a channel number greater than 10. After pressing ☰, you can select the text page by entering the three digit page number.

CLEAR/☰ (text)

BD Clears the entry field.
TV Accesses text.

5 ◯◯◯ (audio) (page 73)/DIGITAL

BD AMP Selects the language when multi-lingual tracks are recorded on a BD-ROM/DVD VIDEO.
Selects the sound track on CDs.
TV Switches to digital mode.

(subtitle) (page 73)/ANALOG

BD Selects the subtitle language when multi-lingual subtitles are recorded on a BD-ROM/DVD VIDEO.

TV Switches to analogue mode.

(angle)/ (wide)

BD Switches to other viewing angles when multi-angles are recorded on a BD-ROM/DVD VIDEO.

TV Changes the aspect ratio of the connected TV.

6 REPEAT

BD Plays music tracks repeatedly. Pressing repeatedly cycles through all track repeat, one track repeat, and off.

SHUFFLE

BD Plays all the music discs in random order. Pressing the button toggles between random playback on and off.

ALL DISCS

BD Plays all the music or photo discs in the player.

Plays all the music discs repeatedly or randomly during Repeat Play or Shuffle Play.

The ALL DISCS indicator lights up in the front panel display.

To cancel, press the button again.

7 TIME

BD Displays the elapsed/remaining playback time in the front panel display. Each time you press the button, the display changes as follows.

When playing a BD-ROM/DVD VIDEO

Elapsed time of the current title
↓
Remaining time of the current title

When playing a CD

Elapsed time of the current track
↓
Remaining time of the current track
↓
Elapsed time of the current disc
↓
Remaining time of the current disc

DISPLAY (page 15)/ (info.)/ (text reveal)

BD TV AMP

When playing a video or photo

Displays the disc or file information on the screen.

When playing music

Displays the playback information on the front panel display.

Each press changes the display as follows:

Playing time → Track name → Album name

When displaying the home menu

Displays the currently selected category icon/group name/sorting order and operation guide.

8 Colour buttons (red/green/yellow/blue)

BD Short cut keys for selecting items on some BD's menus (can also be used for BD's Java interactive operations).

9 TOP MENU (page 39)/ (guide)

BD Opens or closes a BD's or DVD's Top Menu.

TV Displays the Digital Electronic Programme Guide (EPG).

POP UP/MENU (page 39)/GUI MODE

BD Opens or closes a BD-ROM's Pop-up Menu or the DVD's menu.

AMP Switches the menu display mode between GUI MODE and DISPLAY MODE.

OPTIONS (page 38, 44, 48)/TOOLS

BD TV AMP

The options menu that can be selected appears on the screen.

HOME (page 15, 37, 63)/MENU

BD TV AMP

Enters or exits the home menu.

RETURN

BD TV AMP

Returns to the previous display.

←/↑/↓/→

BD TV AMP

Moves the highlight to select a displayed item.

(enter)

BD TV AMP

Enters the selected item.

→continued

10 SORT

BD Changes the title order. Each time you press the button, the list is sorted by the selected item.

GROUP

BD Displays titles by category. Each time you press the button, the list is switched by the selected category.

11 I◄◄/►►I (previous/next)

BD TV Skips to the previous/next chapter, track, or file.
To go to the beginning of the previous track, press I◄◄ twice.

←•/•→ (instant replay/instant advance)

BD TV Replays the scene/briefly fast forwards the scene.

◄◄/►►
(fast reverse/fast forward)

BD TV Fast reverses/fast forwards the disc when pressed during playback.
Each time you press the button, search speed changes as follows*:
Playback direction
►►1 (×10) → ►►2 (×30) → ►►3 (×120)
Reverse direction
◄◄ (×1) → ◄◄1 (×10) → ◄◄2 (×30) → ◄◄3 (×120)
When you press and hold the button, fast forward/fast reverse continues at the selected speed until you release the button.

* Search speed does not change when playing CDs.
Speed multiple values are approximate.

– To resume normal playback, press ►.

To play in slow, freeze frame (playback direction only)

Plays BDs/DVDs in slow motion when ►► is pressed for more than one second in pause mode.
Plays one frame at a time when ►► is pressed briefly in pause mode.
– To resume normal playback, press ►.

► (play) (page 37)

BD TV Starts or re-starts playback.
Plays a slideshow when a disc containing JPEG image files is inserted.

SCENE SEARCH (page 40)

BD Switches to Scene Search mode, which lets you move quickly between scenes within the title currently being played back.

II (pause) (page 38)

BD TV Pauses or re-starts playback.

■ (stop)

BD TV Stops playback and remembers the stop point (resume point) (page 38, 45).

12 (muting) (page 59)

TV AMP Turns off the sound temporarily.

(volume) +/– (page 59)

BD TV AMP
Adjusts the volume.

DISC SKIP (page 38, 45, 49)/ PROG +/–, /

BD Selects the disc you want to play. Press DISC SKIP+/– repeatedly until you find the disc you want to play. When you release the button, playback of the selected disc starts.

TV Selects the TV channels up and down. After pressing , you can select the next () or previous () text page.

13 DIMMER

BD Adjusts the lighting of the front panel display.

RENTAL SLOT (page 35)

BD Opens or closes the front cover to play a disc in slot number 1.

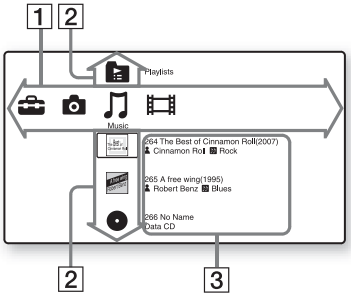
LOAD (page 51)

BD Reads the disc information of all unknown discs, and loads it into the memory.

Guide to On-screen Menu Display

Home menu display

The “home menu” appears when you press HOME, and provides entries to select a disc or setting item.



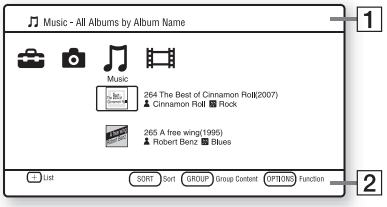
1 Category icons
“Video” : Lists the discs containing video.
“Music” : Lists the discs containing music.
“Photo” : Lists the discs containing photo.
“Setup” : Lists the setting items.

2 Discs, Playlists
The disc icons indicate as follows.
“Other Discs”: Group of invalid discs or an update disc
“Unknown Discs”: Group of unidentified discs
“Playlists”: Group of music playlists
(disc icon): Discs whose jacket picture cannot be acquired from Gracenote Database.

3 Disc information icons
: Music genre
: Movie genre
: Music artist/Movie cast
: Movie director

To display information at the top and bottom of the screen

Press DISPLAY. Press the button again to turn off the display.



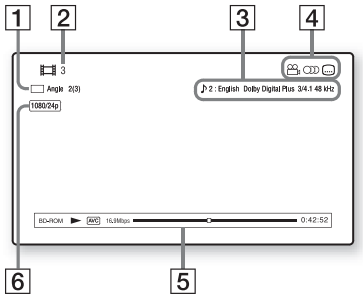
1 Header information
Displays the currently selected category/ folder name and list type (group name/ sorting order)

2 Footer information
Displays available buttons and their functions

Screen displays during playback

For video and photo playback, the display turns on/off by pressing DISPLAY.
The displayed information differs depending on the disc type and player status.

When playing a BD-ROM/DVD VIDEO



1 The currently selected angle

2 Title number or name

3 The currently selected audio or subtitle setting

4 Available functions (angle/ audio/ subtitle)

➡continued

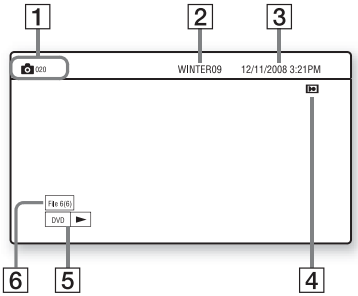
5 Playback information
Displays Disc type/Play mode/Video codec/Bit rate/Playing status bar/Playing time (Remaining time*)

6 Output resolution/Video frequency

* Displayed when you press TIME repeatedly.

- You can also check the playback information in the front panel display (page 10).
- Press , , or , and you can check each type of information.

When playing a photo file



1 File name

2 Album name

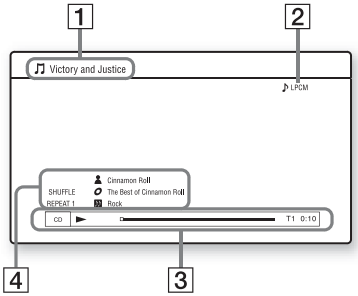
3 Shooting date

4 Rotating status

5 Disc type/Playing status

6 Current file number/total number of files

When playing a music CD/MP3 audio track



1 Track/file name

2 Audio mode

3 Playing information
Displays Disc type/Playing status bar/Track number/Playing time

4 Track information
Displays Artist name/Album name/Genre name/Play mode

Getting Started

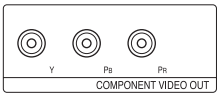
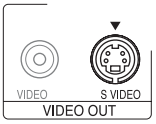
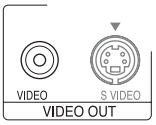
Hooking Up the Player

Check that you have the following items.
- Audio/video cord (phono plug ×3) (1)
- Mains leads (AC power cords) (2)
- Remote commander (remote) (1)
- Size AA (R6) batteries (2)

Follow steps 1 through 9 to hook up and adjust the settings of the player. Do not connect the mains lead (AC power cord) until you reach “Step 5: Connecting the Mains Lead (AC Power Cord)” (page 30).

Step 1: Connecting to Your TV

The player has the following video jacks. Connect the player to your TV according to the input jack on your TV.
If you connect the player to your TV using an HDMI cable, you can enjoy high quality digital pictures and sound through the HDMI OUT jack.

Jack type			Video resolution	Hookup
High quality	Digital		High Definition: 1080/24p, 1080p, 1080i, 720p Standard Definition: 480p/576p, 480i/576i	See “Connecting to an HDMI jack” (page 19).
	Analogue		High Definition: 1080i, 720p Standard Definition: 480p/576p, 480i/576i	See “Connecting to component video jacks (Y/PB/PR)” (page 21).
			Standard Definition: 480i/576i	See “Connecting to an audio/video or S VIDEO jack” (page 22).
			Standard Definition: 480i/576i	See “Connecting to an audio/video or S VIDEO jack” (page 22).
Standard quality				

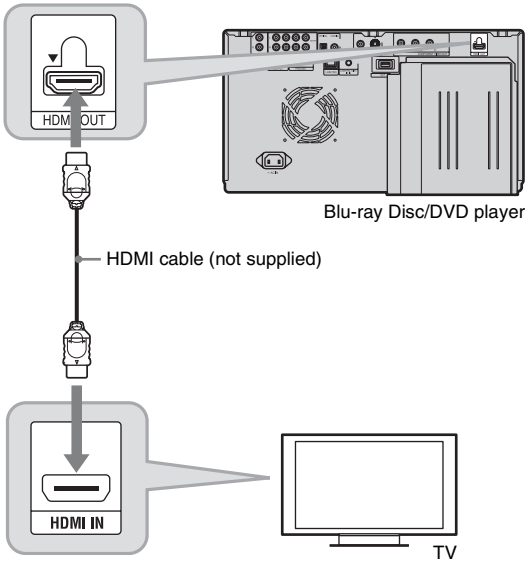
- Plug in cables securely to prevent unwanted noise.
- Refer to the instructions supplied with the components to be connected.
- You cannot connect this player to a TV that does not have a video input jack.
- Do not apply too much pressure on the connecting cables. Pushing against the cabinet wall, etc., may damage the cable.

To connect to a TV with DVI input

Use an HDMI-DVI converter cable (not supplied). A DVI jack will not accept audio signals, so you need to use another audio connection in addition to this connection (page 23).
Furthermore, you cannot connect the HDMI OUT jack to DVI jacks that are not HDCP compliant (e.g., DVI jacks on PC displays).

Connecting to an HDMI jack

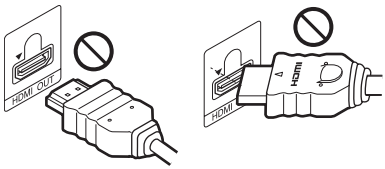
Connect the player and your TV using an HDMI cable to enjoy high quality digital pictures and sound through the HDMI OUT jack.
If you connect a Sony TV that is compatible with the "Control for HDMI" (BRAVIA Sync) function (page 56), refer to the operating instructions supplied with the TV.
If you connect a 1080/24p- or 1080p-compatible TV, use a High Speed HDMI cable.



Notes on connecting to the HDMI OUT jack

Observe the following as improper handling may damage the HDMI OUT jack and the connector.

- Carefully align the HDMI OUT jack on the rear of the player and the HDMI connector by checking their shapes. Make sure the connector is not upside down or tilted.



- Be sure to disconnect an HDMI cable when moving the player.

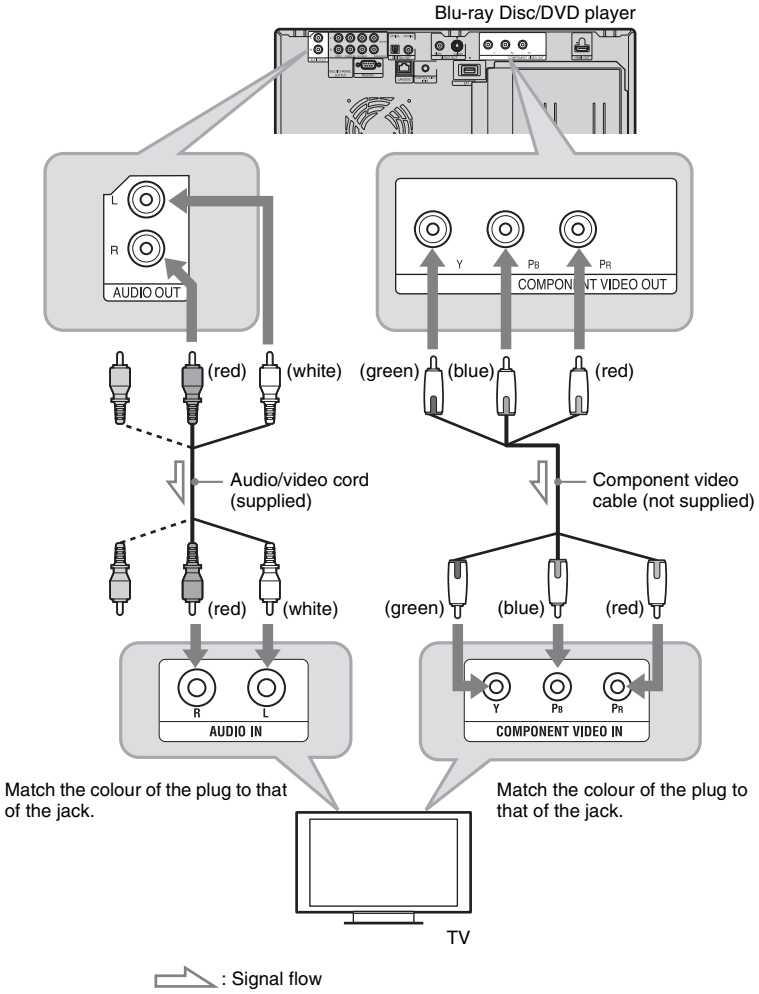
- If you place the player on a cabinet with an HDMI cable connected, do not apply too much pressure to the cabinet wall. It may damage the HDMI OUT jack or the HDMI cable.
- When connecting or disconnecting, do not screw in or rotate the HDMI connector.

➡continued

- Not all high definition television sets are fully compatible with this product and may cause artifacts to be displayed in the picture. In the case of 480i (576i)/480p (576p)/720p/1080i/1080p scan picture problems, it is recommended that the user switch the connection to the VIDEO OUT (VIDEO or S VIDEO) jack. If there are questions regarding our TV set compatibility with this model 480i (576i)/480p (576p)/720p/1080i/1080p Blu-ray Disc/DVD player, please contact our customer service centre.
- If the picture is not clear, unnatural or not to your satisfaction, change the video output resolution in step 3 of “Output Video Format” under the “Video Settings” setup (page 66).
- Be sure to use only an HDMI cable that bears the HDMI logo.

Connecting to component video jacks (Y/PB/PR)

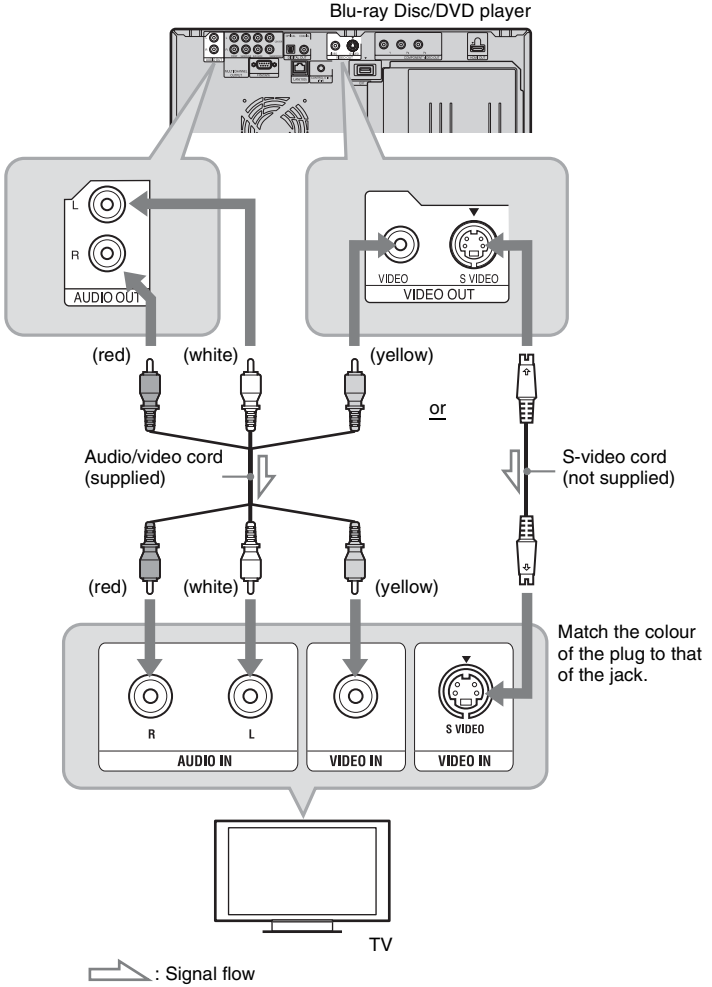
Connect the COMPONENT VIDEO OUT jacks of the player and your TV using a component video cable or three video cables (not supplied) of the same kind and length. You can enjoy high-quality pictures.
Be sure to connect to the AUDIO OUT (L/R) jacks using the audio/video cord.



When you connect the player and TV using a component video cable, disconnect the video plug (yellow) of the audio/video cord.

Connecting to an audio/video or S VIDEO jack

Connect the VIDEO OUT (VIDEO) jack and AUDIO OUT (L/R) jacks of the player and your TV using the audio/video cord. You can enjoy standard quality pictures and sound.



When you connect the player and TV using an S-video cord, disconnect the video plug (yellow) of the audio/video cord.

Step 2: Connecting to Your AV Amplifier (Receiver)

AV amplifier (receiver) and cable requirements differ as follows, depending on the source.
To enjoy BD high quality sound, set "BD Audio Setting" to "Direct" in the "Audio Settings" setup (page 71).
To enjoy secondary audio and interactive audio, set "BD Audio Setting" to "Mix" in the "Audio Settings" setup (page 71).

To enjoy	Source	AV amplifier (receiver)	Cable (hookup)
7.1 channel audio	Dolby TrueHD	Dolby TrueHD-compatible AV amplifier (receiver)	HDMI cable[*1] (page 24) or 7.1 channel audio cord[*2] (page 26)
	Dolby Digital Plus	Dolby Digital Plus-compatible AV amplifier (receiver)	
	DTS-HD (DTS-HD High Resolution and DTS-HD Master Audio)	DTS-HD-compatible AV amplifier (receiver)	
	LPCM	7.1 channel LPCM-compatible AV amplifier (receiver)	
5.1 channel audio	Dolby Digital	Dolby Digital-compatible AV amplifier (receiver)	HDMI cable (page 24), Digital optical/coaxial cord (page 25), or 7.1 channel audio cord (page 26)
	DTS	DTS-compatible AV amplifier (receiver)	
Stereo audio	—	Stereo audio-compatible AV amplifier (receiver)	Stereo audio cord (page 27)

[*1] When "BD Audio Setting" is set to "Direct" in the "Audio Settings" setup, audio signals decoded by the AV amplifier (receiver) are output.

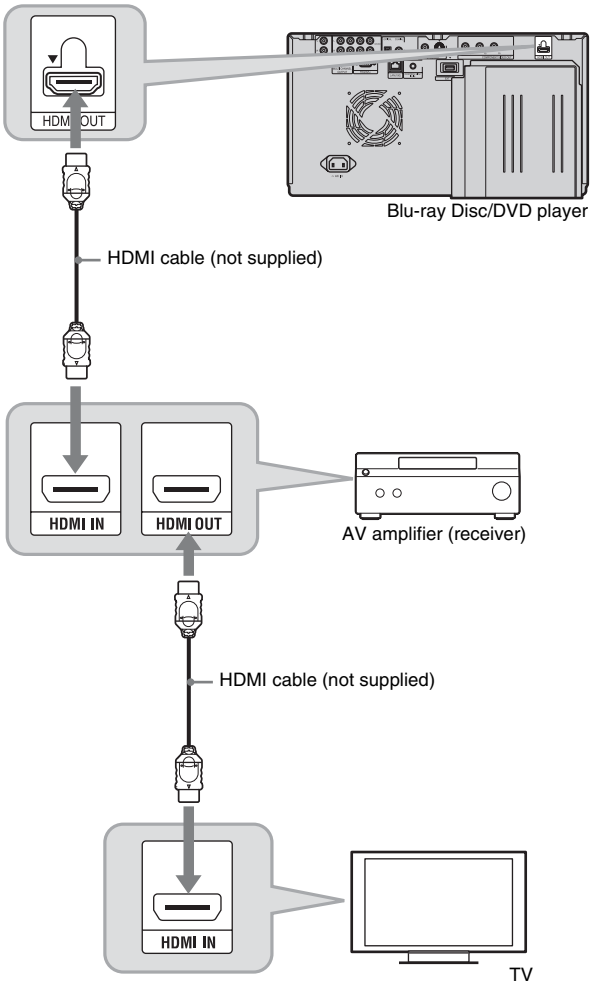
[*2] When "BD Audio Setting" is set to "Direct" in the "Audio Settings" setup, the HD Audio (Dolby Digital Plus, Dolby TrueHD, DTS-HD High Resolution Audio, and DTS-HD Master Audio) signal decoded by the player is output. When "BD Audio Setting" is set to "Mix" in the "Audio Settings" setup, the DTS-HD audio is output as 5.1 channel DTS-decoded audio.

- The supported audio formats of BDs/DVDs are specified on the back of each package.
- For details on audio output signals, see "Audio Output Signals" on page 89.

- When you connect the player to your AV amplifier (receiver) using an HDMI cable, do one of the following:
  – Connect your AV amplifier (receiver) to your TV using an HDMI cable, or
  – Connect the player to your TV using a video cable other than an HDMI cable (component video cable, S-video cord, or audio/video cord).
- If you connect a component that does not conform to the selected audio signal, a loud noise (or no sound) will come from the speakers, which could damage your ears or the speakers.

Connecting to an HDMI jack

If your AV amplifier (receiver) has an HDMI input, you can enjoy surround sound.
If you connect a Sony AV amplifier (receiver) that is compatible with the "Control for HDMI" function (page 56), refer to the operating instructions supplied with the AV amplifier (receiver).

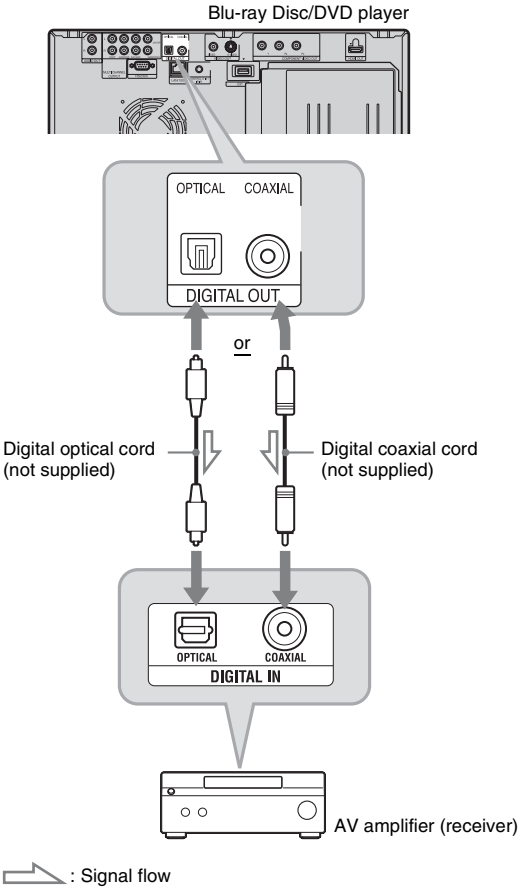


Make the following settings to enjoy higher quality sound from the connected AV amplifier (receiver).
– Set "Audio Output Priority" to "HDMI" in the "Audio Settings" setup (page 69).
– Set "Audio (HDMI)" to "Auto" in the "Audio Settings" setup (page 71).
– Set "BD Audio Setting" to "Direct" in the "Audio Settings" setup (page 71).

Not all HDMI-compatible AV amplifiers (receivers) accept 8ch Linear PCM signals. Refer also to instructions supplied with the connected AV amplifier (receiver).

Connecting to digital jacks (OPTICAL/COAXIAL)

If your AV amplifier (receiver) has a Dolby Digital, Dolby Pro Logic, or DTS decoder and a digital input jack, you can enjoy Dolby Digital (5.1ch), Dolby Pro Logic (4.0ch), or DTS (5.1ch) surround effects.



1 Connect the digital jack of the player and your AV amplifier (receiver).

2 Set "Audio Output Priority" to "Coaxial/Optical" in the "Audio Settings" setup (page 69).

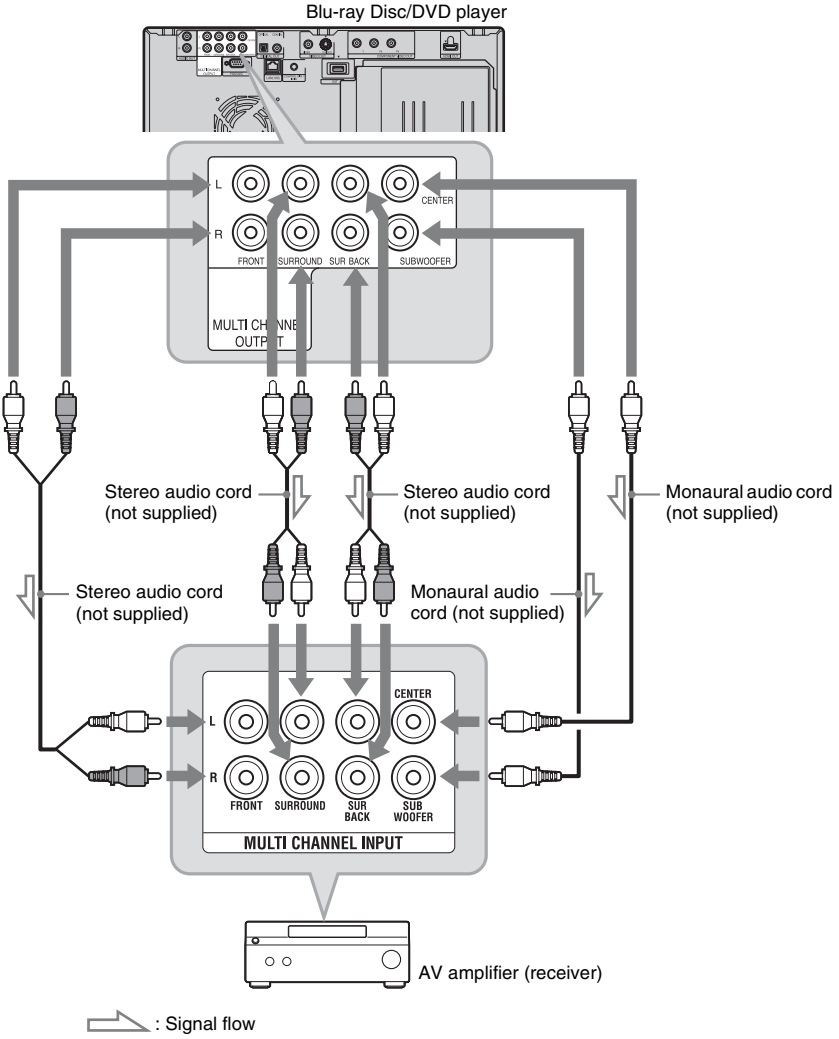
3 Make the appropriate settings in "Dolby Digital" and "DTS" under the "Audio Settings" setup (page 72).

Otherwise, no sound or a loud noise will come from your speakers.

➡*continued*

Connecting to 7.1 channel jacks

If your AV amplifier (receiver) has 7.1 channel inputs, you can enjoy multi channel surround sound.



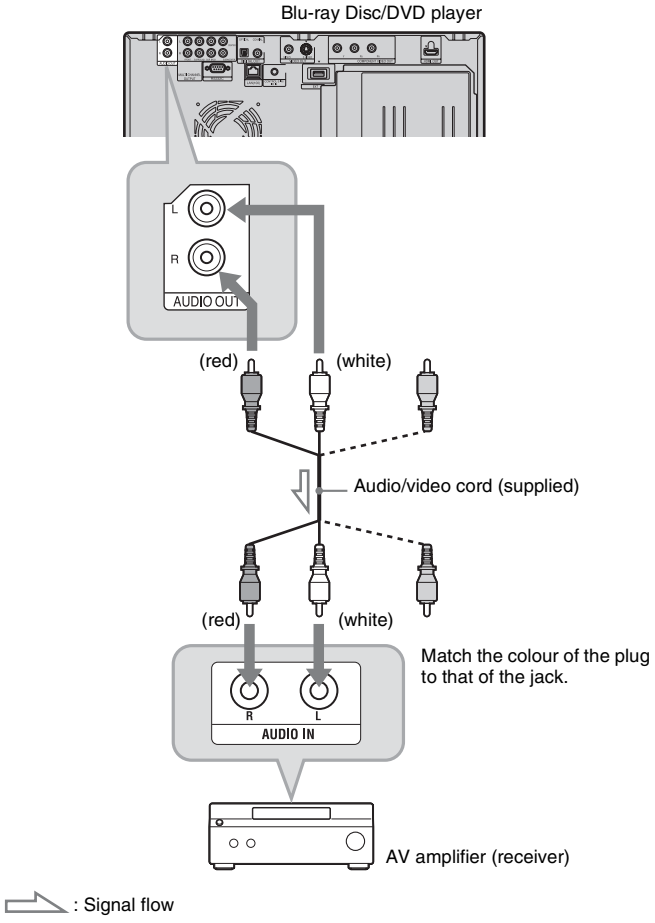
1 **Connect the 7.1 channel jacks of the player and your AV amplifier (receiver).**

2 **Set "Audio Output Priority" to "Multi Channel Analogue" in the "Audio Settings" setup (page 69).**

3 **Make the appropriate settings in "Speaker Settings" under the "Audio Settings" setup (page 69).**

Connecting to audio L/R jacks

If your AV amplifier (receiver) only has L and R audio input jacks, use this connection.

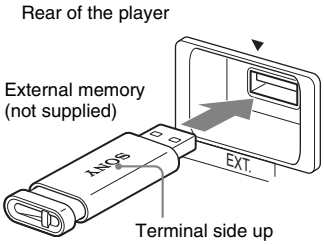


Step 3: Inserting an External Memory

To enjoy additional content (such as BonusView/BD-Live) on certain Blu-ray Disc titles, you will need to use an external memory (not supplied).
Insert the external memory device (1 GB or larger USB flash memory, such as Sony USM2GL or USM2GH) into the EXT slot as your local storage.

Insert the external memory into the EXT slot as far as it will go.

Check that the EXT indicator lights up in the front panel display when turning the player on.



To remove the external memory

1. Press I/⏻ to turn the player off.
2. Pull the external memory out from the EXT slot.

- Do not connect anything other than a USB flash memory, such as an HDD, etc., to the EXT slot.
- Insert the external memory straight. If you force the external memory into the slot, this will cause damage to both the external memory and the player.
- Keep the external memory away from small children to prevent them from accidentally swallowing it.
- Do not apply too much pressure to the external memory in the slot, as it may cause a malfunction.
- The Sony USM2GL (available as of September 2009) is recommended.
- Other USB flash devices may support this function. However we cannot guarantee compatibility with all USB flash memory devices.
- When inserting a USB flash memory, check the insertion direction before inserting it.
- Some USB flash memory devices may stick out from the EXT slot. Do not force into the slot or apply pressure to the protruding portion of the USB flash memory.
- To avoid data corruption or damage to the external memory, turn the player off when inserting or removing the external memory.
- If the EXT indicator does not light up, turn the player off, remove and re-insert the external memory, then turn the player on again.
- The external memory is used as the local storage for BonusView/BD-Live. Insert a blank external memory, or one containing nothing other than photo or music files, to avoid corrupting the contained data.

Step 4: Connecting to the Network

Connect the LAN (100) terminal of the player to your Internet source using a network cable to receive disc information or update the player's software. You can also enjoy the BD-Live function (page 39).

1 Connect the LAN (100) terminal of the player to your Internet source.

Methods to connect to your Internet source include:

- Connecting to a broadband router directly
- Connecting via a wireless LAN router

Refer also to the instructions supplied with the broadband router or the wireless LAN router.

2 Make the appropriate settings in "Internet Settings" under the "Network Settings" setup (page 78).

To update the player's software using the network

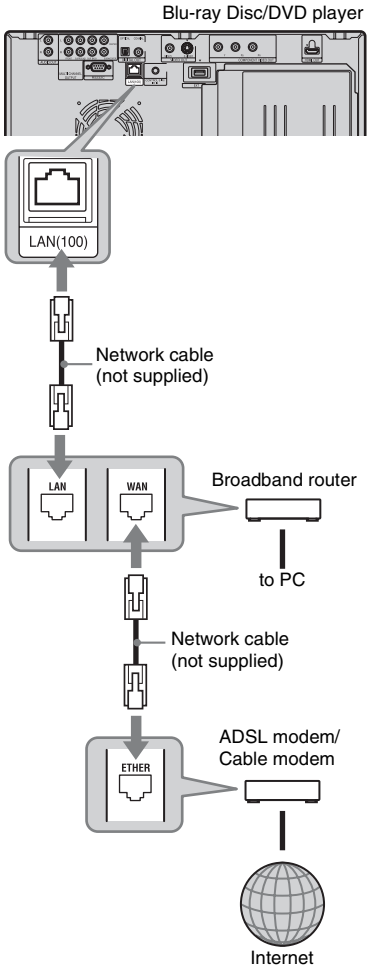
See "Network Update" (page 64) and "Software Update Notification" (page 77).

To enjoy the BD-Live function

See "Enjoying BonusView/BD-Live" (page 39).

- Do not connect a phone line to the LAN (100) terminal, as it may cause a malfunction.
- For optimal performance of BD-Live functions, we recommend using an Internet connection with an effective speed of 1 Mbps or greater.
- To allow Internet connections from BD contents, select "Allow" in "BD Internet Connection" during Easy Setup (page 31). To change the setting, see page 75.

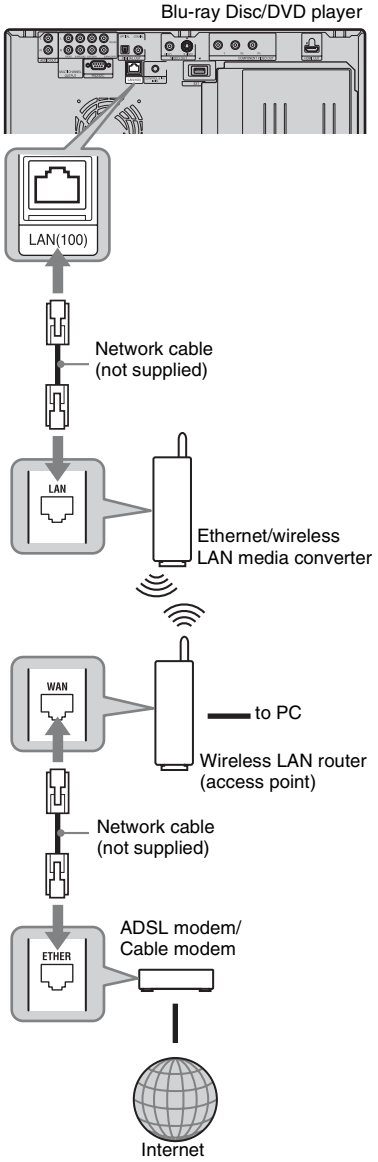
When connecting to a broadband router directly



About network (LAN) cables

Depending on the modem or router, the type of network (LAN) cable, straight or crossing, differs. For details on network (LAN) cables, refer to the operating instructions supplied with the modem or router.

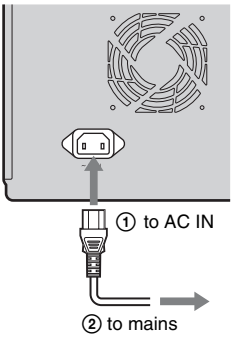
When connecting via a wireless LAN router



Do not connect the LAN terminal of the player to the LAN terminal of the PC.

Step 5: Connecting the Mains Lead (AC Power Cord)

After all other connections are complete, connect the supplied mains lead (AC power cord) to the AC IN terminal of the player. Then plug the player and TV mains leads (AC power cords) into a mains.



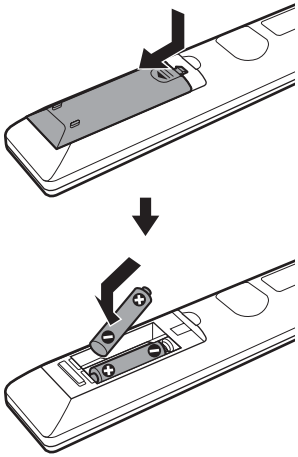
See the mains lead (AC power cord) information in “WARNING” (page 2).

Step 6: Preparing the Remote

You can control the player using the supplied remote.

Inserting batteries into the remote

Insert two Size AA (R6) batteries by matching the ⊕ and ⊖ ends on the batteries to the markings inside the battery compartment. When using the remote, point it at the remote sensor ▣ on the player (page 9).

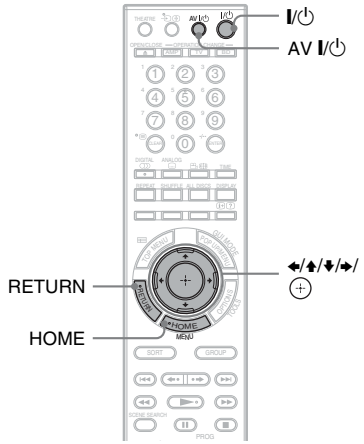


- Use the batteries correctly to avoid possible leakage and corrosion. Should leakage occur, do not touch the liquid with bare hands. Observe the following:
  - Do not use a new battery with an old battery, or batteries of different manufacturers.
  - Do not attempt to recharge the batteries.
  - If you do not intend to use the remote for an extended period of time, remove the batteries.
  - If battery leakage occurs, wipe out any liquid inside the battery compartment, and insert new batteries.
- Do not expose the remote sensor (marked ▣ on the front panel) to strong light, such as direct sunlight or a lighting apparatus. The player may not respond to the remote.

Step 7: Easy Setup

Follow the steps below to make the minimum number of basic adjustments to use the player. If you do not complete Easy Setup, it will appear each time you turn on your player.
Make the settings below in the following order.

When turned on for the first time
Wait for a short while before the player turns on and starts Easy Setup.



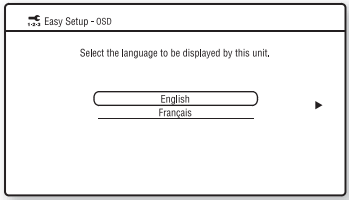
1 Press AV I/⏻ to turn on the TV.

2 Press I/⏻ to turn on the player.
The player turns on after a moment.

3 Switch the input selector on your TV so that the signal from the player appears on your TV screen.
The display for OSD language selection appears.
- If the display for OSD language selection does not appear, press HOME, and select “Easy Setup” in the “Setup” setup (page 79). Then, select “Start,” and press ⊕.

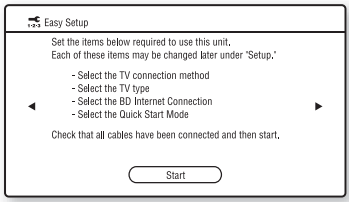
➡continued

4 Select a language for the on-screen displays using ↑/↓, and press ⊕.

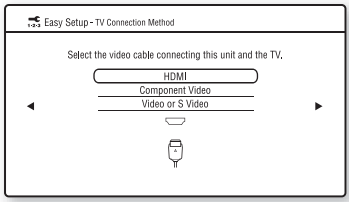


The initial settings message appears.

5 Select “Start,” and press ⊕.


Easy Setup
Set the items below required to use this unit.
Each of these items may be changed later under 'Setup.'
- Select the TV connection method
- Select the TV type
- Select the BD Internet Connection
- Select the Quick Start Mode
Check that all cables have been connected and then start.
Start

6 Select the cable type used to connect the player to your TV, and press ⊕.


Easy Setup - TV Connection Method
Select the video cable connecting this unit and the TV.
HDMI
Component Video
Video or S Video

Select “HDMI” when connecting your TV using an HDMI cable, and go to step 7.

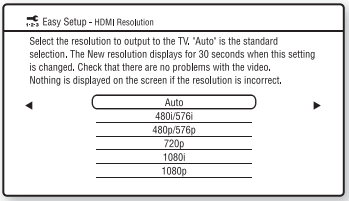
When connecting the HDMI OUT jack and other video output jacks at the same time, select “Component Video.”

Select “Component Video” when connecting your TV using a component video cable, and go to step 7.
Select “Video or S Video” when connecting your TV using a video cord or S-video cord, and go to step 8.

7 Select a video output resolution for the connected TV, and press ⊕.

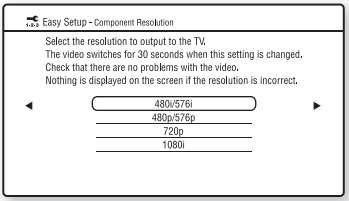
For details about the video output resolution, see page 67.

When you select “HDMI” in step 6


Easy Setup - HDMI Resolution
Select the resolution to output to the TV. "Auto" is the standard selection. The New resolution displays for 30 seconds when this setting is changed. Check that there are no problems with the video.
Nothing is displayed on the screen if the resolution is incorrect.
Auto
480i/576i
480p/576p
720p
1080i
1080p

When “Auto” or “1080p” is selected and the HDMI OUT jack and other video output jacks are connected at the same time, video signals may output from the HDMI jack only.
When connecting other equipment at the same time, press RETURN to return to step 6 and change the “TV Connection Method” setting.

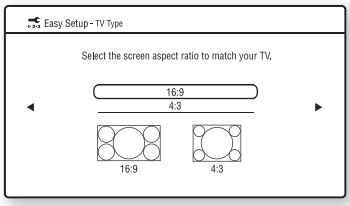
When you select “Component Video” in step 6


Easy Setup - Component Resolution
Select the resolution to output to the TV.
The video switches for 30 seconds when this setting is changed.
Check that there are no problems with the video.
Nothing is displayed on the screen if the resolution is incorrect.
480i/576i
480p/576p
720p
1080i

Follow the on-screen instructions and go to the next step.

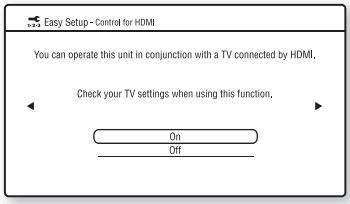
If the picture is distorted or no picture appears, wait for about 30 seconds without pressing any buttons. The display returns to the resolution setting screen.
If the selected video output resolution is incorrect, no picture will appear on the screen when you press any button within those 30 seconds. In this case, press ■ on the player for more than 10 seconds to reset the video output to the lowest resolution. To change the video output resolution, set “Output Video Format” in the “Video Settings” setup (page 66).

8 Select the aspect ratio that matches your TV, and press ⊕.



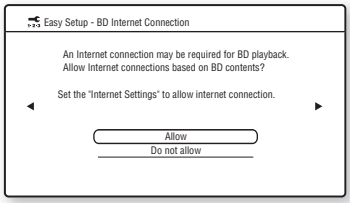
Select “16:9” when connecting to a wide-screen TV or a TV with a wide mode function.
Select “4:3” when connecting to a 4:3 screen TV without a wide mode function.

9 (Only when connecting your TV using an HDMI cable) Set the “Control for HDMI” function to “On” or “Off,” and press ⊕.


Easy Setup - Control for HDMI
You can operate this unit in conjunction with a TV connected by HDMI.
Check your TV settings when using this function.
On
Off

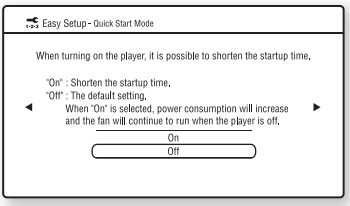
Select “On” to use the “Control for HDMI” function when connecting Sony components that are compatible with the “Control for HDMI” function (page 56). If you do not use the “Control for HDMI” function, select “Off.”

10 Select “Allow” to allow Internet connection from BD contents, and press ⊕.


Easy Setup - BD Internet Connection
An Internet connection may be required for BD playback.
Allow Internet connections based on BD contents?
Set the "Internet Settings" to allow internet connection.
Allow
Do not allow

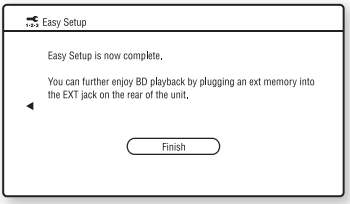
Select “Do not allow” to not allow Internet connection from BD contents.

11 Set “Quick Start Mode” to “On” or “Off,” and press ⊕.


Easy Setup - Quick Start Mode
When turning on the player, it is possible to shorten the startup time.
"On" : Shorten the startup time.
"Off" : The default setting.
When "On" is selected, power consumption will increase and the fan will continue to run when the player is off.
On
Off

For details about “Quick Start Mode,” see page 77.

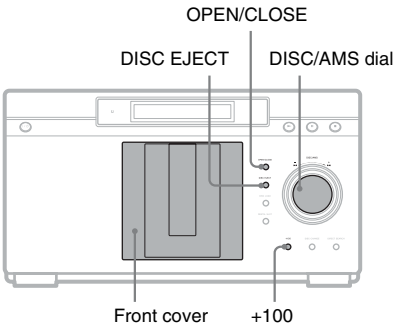
12 Select “Finish,” and press ⊕.


Easy Setup
Easy Setup is now complete.
You can further enjoy BD playback by plugging an ext memory into the EXT jack on the rear of the unit.
Finish

- You can reset settings to their factory defaults (page 80).
- You can run “Easy Setup” again from “Easy Setup” in “Setup” (page 79).

Step 8: Inserting Discs

You can insert up to 400 discs into this player.

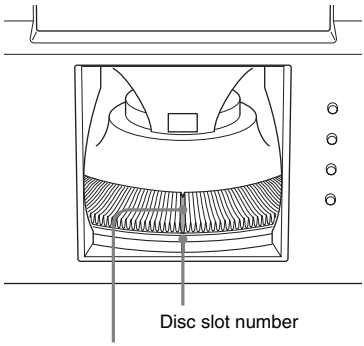


1 Press OPEN/CLOSE.

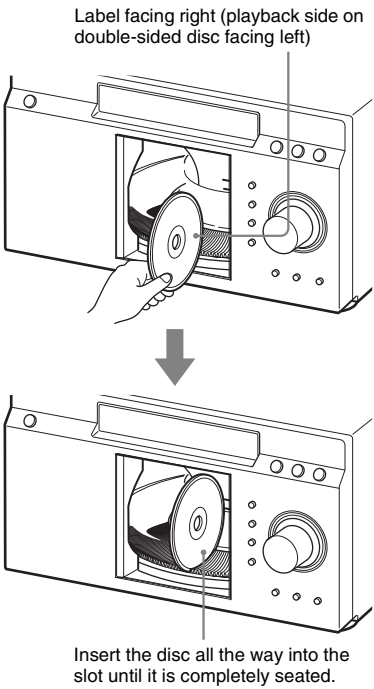
The front cover opens.

2 Turn the DISC/AMS dial until you find the disc slot where you want to insert a disc.

You can check the disc slot number indicated on the front panel display or by the slot.



3 Insert a disc with the label side facing right.


Label facing right (playback side on double-sided disc facing left)
Insert the disc all the way into the slot until it is completely seated.

4 Repeat the above steps to insert more discs.

5 Press OPEN/CLOSE.

The front cover closes. The rotary table turns and the disc slot last selected is set to the playing position.

- To skip 100 disc slots ahead, press +100 on the player.
- After the front cover is closed, the disc inserted in the slot at the loading position will be automatically loaded and set to the playing position.

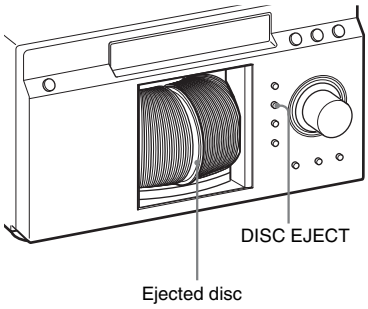
- Make sure you have inserted the disc into each slot at a right angle to the rotary table. If the disc is not inserted properly, it may damage the player or the disc.
- If you drop a disc into the player and/or the disc does not go into the slot correctly, consult your nearest Sony dealer.
- Make sure the rotary table comes to a complete stop before inserting or removing discs.

• The front cover closes automatically when you press ►. Be careful not to put your hand into the player after pressing ►, otherwise your hand may be caught in the front cover.

To remove discs

1 While checking the disc slot number indicated on the front panel display or by the slot, turn the DISC/AMS dial until you find the disc you want to remove.

2 Press DISC EJECT.
The selected disc is set to the loading position and the front cover opens.
The disc in the selected slot moves up.



3 Remove the disc.
Repeat the above steps to remove other discs.

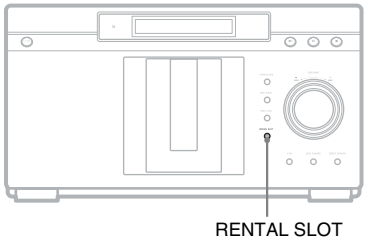
4 Press OPEN/CLOSE.
The front cover closes.

You can remove the current disc by directly pressing DISC EJECT on the player.

- Do not turn the turntable by hand.
- Do not reach inside of the turntable compartment. Always follow the correct steps for inserting and removing discs.
- When transporting the player, remove all discs from the player. Failure to remove the discs may cause damage to the player.
- When closing the front cover, be careful not to let anything get caught between the door and the player.

Inserting a rental disc

By pressing RENTAL SLOT, slot number 1 is set to the loading position for easy playback/removal of a rental disc.



1 Press RENTAL SLOT.
Slot number 1 is set to the loading position and the front cover opens.

2 Insert a disc.

3 Press RENTAL SLOT.
The front cover closes and slot number 1 is set to the playing position.

To remove the disc

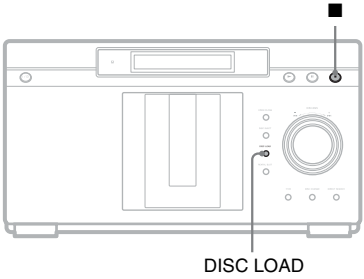
1 Press RENTAL SLOT.
Slot number 1 is set to the loading position and the front cover opens.

2 Remove the disc.

When the front cover opens, pressing RENTAL SLOT sets slot number 1 to the loading position.

Step 9: Loading Disc Information

The player reads the disc information of all the unknown discs and loads it all into memory so that disc type, titles, and other text information can be displayed on the list.



Press DISC LOAD when the player's home menu is displayed on the TV screen.

Loading starts.
The player accesses the Gracenote Database for disc information.
When loading finishes, the title list appears.

To cancel loading

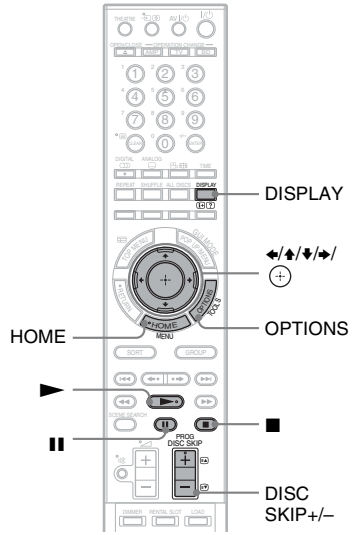
Press ■.
The loaded data is saved.

- Discs whose information is not in the Gracenote Database will be indicated as "No Name" in the title list.
- The player cannot load disc information during playback. You need to stop playback and display the home menu before pressing DISC LOAD. When viewing a photo or video, press ■. When playing music, press RETURN.
- Loading disc information for approx. 300 or 400 discs at one time may take a long time to complete. Loading time also depends on your network speed.
- Discs that failed to register at the time of loading are indicated as "Unknown Discs" in the title list. You can register them manually (page 52).

Playback

Playing BDs/DVDs

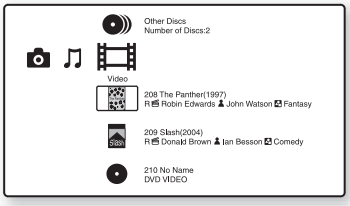
BD DVD



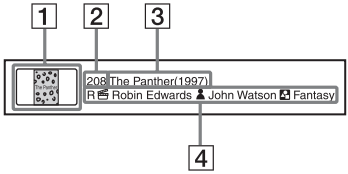
1 **Switch the input selector on your TV so that the signal from the player appears on your TV screen.**

2 **Press HOME.**

3 **Select (Video) using ←/→.**



◆Guide to Disc Information



1 Disc jacket

2 Slot number

→continued

3 Title (Release year)

4 Rating/Director name/Cast name/Genre

4 Select a disc using ↑/↓, and press ►.

To select a title

When you play BDs or DVDs recorded on other equipment, you can select a title.

1 Follow steps 1 to 3 of "Playing BDs/DVDs" (page 37).

2 Select a disc using ↑/↓, and press ⊕. The titles appear.

3 Select a title using ↑/↓, and press ►.

Available OPTIONS

The options menu appears when you press OPTIONS. The available items differ depending on the situation.

1 Press OPTIONS. The options menu appears.

2 Select an item using ↑/↓, and press ⊕.

◆Available OPTIONS on the list screen

Items	Details
Load All Discs	Loads all disc information.
Sort By	Changes the title order. • Title Name • Slot Number • Release Year
Group Content	Displays titles by categories. • All Titles • By Genre • By Cast • By Director
Play	Resumes playback from the stop point. Resume Play is cancelled when: – The disc is changed.
Start	Starts version up (page 65).
Edit	Edits the disc information (page 53).
Load	Loads disc information (page 51).
Eject	Ejects the disc.

◆Available OPTIONS during playback

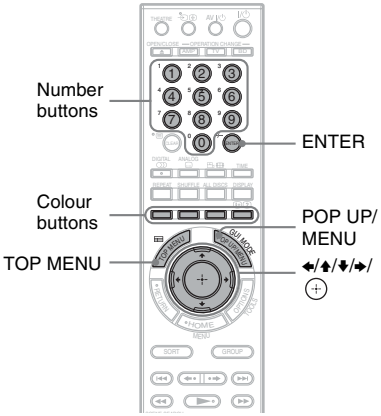
Items	Details
A/V Settings	Adjusts settings for picture and sound. • Video Settings (page 41) • Audio Settings (page 43)
Play from start	Plays the title from the beginning.
Top Menu	Displays the disc's Top Menu (page 39).
Menu/Popup Menu	Displays the BD-ROM's Pop-up Menu or DVD's menu (page 39).
Stop	Stops playback.
Title Search	Searches for a title and starts playback from the beginning (page 41).
Chapter Search	Searches for a chapter and starts playback from the beginning (page 41).
Eject	Ejects the disc.

Various video playback operations

Buttons	Operations
►	Starts playback from the point where you pressed ■.
■	Stops playback.
❚❚	Pauses playback.
DISC SKIP+/–	Changes the disc.
DISPLAY	Displays the disc information.

Using the BD's or DVD's menu

BD DVD



To display Top Menu

When you play a BD or DVD, you can display the Top Menu.

1 Press TOP MENU during playback. The Top Menu appears.

2 Select an item using ←/↑/↓/→.

To display Pop-up Menus

Some BD-ROMs contain Pop-up Menus that appear without interrupting playback.

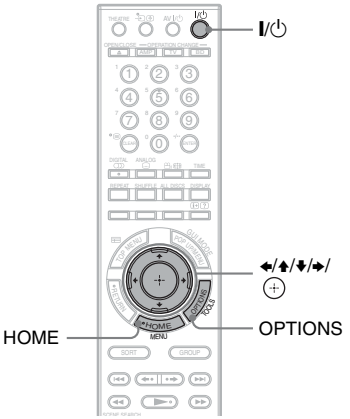
1 Press POP UP/MENU during playback. The Pop-up Menu appears.

2 Select an item using ←/↑/↓/→, the colour buttons or the number buttons, and follow the on-screen instructions.

Enjoying BonusView/BD-Live

BD

Some BD-ROMs have bonus contents and other data that can be downloaded to the external memory (local storage) for enjoyment.



1 Turn the player off.

2 Insert the external memory (not supplied) into the EXT slot on the rear of the player.

The external memory is used as the local storage.
Make sure that the external memory is properly inserted into the player (page 28).

3 Connect the player to a network (page 29).

4 Turn the player on.

5 Set "BD Internet Connection" to "Allow" in the "BD/DVD Viewing Settings" setup (page 75).

6 Insert a BD-ROM with BonusView/BD-Live.

The operation method differs depending on the disc. Refer to the instruction manual supplied with the disc.

To delete data in the external memory

You can delete unnecessary data.

1. Press HOME.
2. Select (Video) using ←/→.
3. Select "BD Data" using ↑/↓, and press ⊕.
4. Select the disc name, and press OPTIONS.
5. Select "Erase," and press ⊕.
6. Select "OK," and press ⊕.
   The data of the selected disc will be deleted.

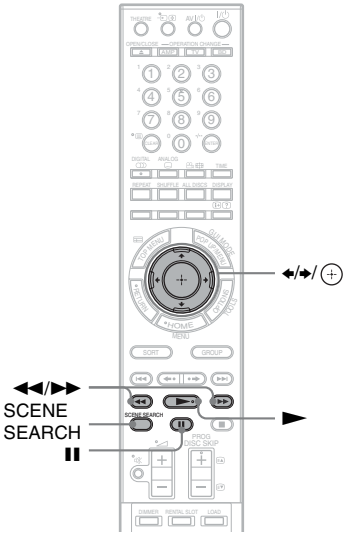
- To delete all data in the external memory at once, select "Erase All" in step 5.
- Press ⊕ instead of OPTIONS in step 4 to skip step 5.

Depending on the BD-ROM, the disc name may not be displayed.

Searching for a scene quickly (Scene Search)

BD DVD

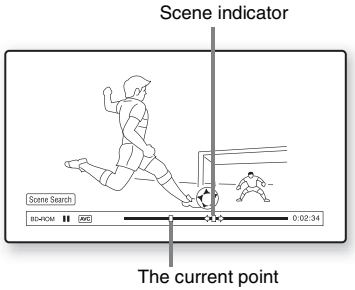
You can move quickly between scenes within the title currently being played back.



1 Press SCENE SEARCH during playback or in pause mode.

Playback pauses and a bar with a scene indicator (square-shaped – indicates the current point) appears at the bottom of the screen.

2 Move the scene indicator to the scene you are searching for using ←/→ or ◀◀/▶▶.



The scene indicator on the bar is displayed around the playing point.

3 Release the button at the point you want to watch.

The scene at which you released the button is displayed in pause mode.
To search for a scene again, move the scene indicator using ←/→ or ◀◀/▶▶.

4 Press SCENE SEARCH, ⊕, ▶, or ❚❚.

Playback starts.

To cancel Scene Search mode

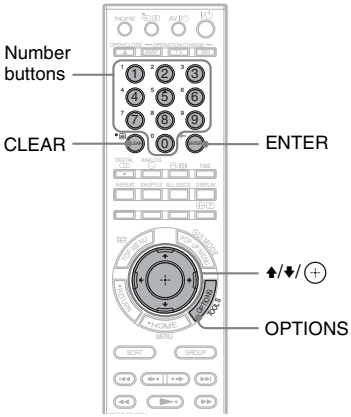
Press SCENE SEARCH, ⊕, ▶, or ❚❚. Playback starts from the point you pressed the button.

- The Scene Search function is available for titles longer than 100 seconds and shorter than 100 hours.
- The Scene Search function may not be available, depending on the disc.

Searching for a Title/Chapter

BD DVD

You can search for a chapter if the title contains chapter marks.



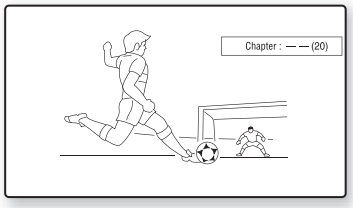
1 Press OPTIONS during playback or in pause mode.

The options menu appears.

2 Select a search method using ↑/↓, and press ⊕.

"Title Search" (for BD-ROMs/DVD VIDEOs)
"Chapter Search"

The display for entering the number appears.
Example: Chapter Search



3 Enter the number of the title or chapter using the number buttons.

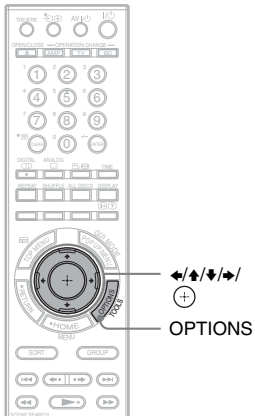
If you make a mistake, press CLEAR, and re-enter another number.

4 Press ENTER.

After a while, the player starts playback from the selected number.

Adjusting picture and sound for videos

BD DVD



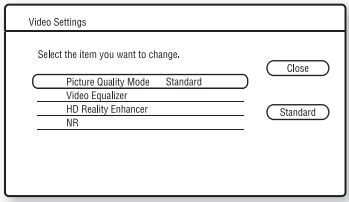
To adjust the picture

1 Press OPTIONS during playback.
The options menu appears.

2 Select "A/V Settings" using ↑/↓, and press ⊕.

→continued

3 Select “Video Settings” using ↑/↓, and press ⊕.
The “Video Settings” screen appears.



4 Select an item using ↑/↓, and press ⊕.
The default settings are underlined.

Items	Details
Picture Quality Mode (Standard/ Brighter Room/ Theatre Room/ Memory)	Selects the picture settings for different lighting environments.
Video Equalizer	This setting is selectable when “Picture Quality Mode” is set to “Memory” (see ““Video Equalizer” elements” on page 42).
HD Reality Enhancer	This setting is available only when video signals are output from the HDMI OUT jack or the COMPONENT VIDEO OUT jacks (see ““HD Reality Enhancer” elements” on page 42).
NR (Noise Reduction)	Reduces the noise in the picture (see ““NR” elements” on page 43).

5 Select or adjust the settings using ←/↑/↓/→, and press ⊕.
To adjust any other items, repeat steps 4 and 5.

The “HD Reality Enhancer” settings are individually set during video and photo playback.

- Set the picture setting of your TV to “Standard” before changing the “Picture Quality Mode” settings.
- “Video Settings” is not available when the connected TV is set to Theatre Mode (page 56).
- Depending on the disc or the scene being played, “FNR,” “BNR” or “MNR” effects may be hard to discern.

◆“Video Equalizer” elements

1 Select “Video Equalizer” in step 4 above, and press ⊕.

2 Select an item, and press ⊕.

Items	Details
Contrast ((weak) –3 ~ 0 ~ 3 (strong))	Changes the contrast.
Brightness ((dark) –3 ~ 0 ~ 3 (bright))	Changes the overall brightness.
Chroma ((light) –3 ~ 0 ~ 3 (deep))	Deepens deep colours, or lightens light colours.
Hue ((red) –3 ~ 0 ~ 3 (green))	Changes overall colour balance.
Gamma	Adjusts the picture balance between light and dark areas.

◆“HD Reality Enhancer” elements

1 Select “HD Reality Enhancer” in step 4 above, and press ⊕.

2 Select an item, and press ⊕.

Items	Details
Enhance (–3 ~ 0 ~ 3)	Enhances the scene picture outline pixel by pixel.
Smoothing (Off/Standard/ High)	Smooths the gradation on flat parts of the picture.
FGR (0 ~ 3)	Reduces film grain.

◆"NR" elements

1 Select "NR" in step 4 above, and press ⊕.

2 Select an item, and press ⊕.

Items	Details
FNR (Off/Auto)	Reduces random noise appearing in the picture.
BNR (Off/Auto)	Reduces mosaic-like block noise in the picture.
MNR (Off/Auto)	Reduces minor noise around the picture outlines (mosquito noise).

To use the Playback Memory function

When you play BDs[*1]/DVDs[*2], the player stores picture settings for each disc, letting you play the same disc with the same settings later. The player can store picture settings for up to 50 discs. When the settings exceed 50, the player automatically erases the oldest setting.

[*1] BD-ROMs and BD-REs/BD-Rs in BDMV mode
[*2] DVD VIDEOs and DVD-RWs/DVD-Rs/DVD+RWs/DVD+Rs in video mode

Set "Playback Memory" to "On" (page 75).

The player can store picture settings during video playback but not during photo playback.

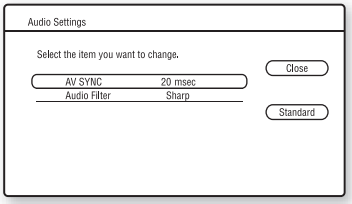
When connected to a Theatre Mode-compatible Sony TV using an HDMI cable, set the TV's video mode to a mode other than Theatre.

To adjust the audio characteristics

1 Press OPTIONS during playback.
The options menu appears.

2 Select "A/V Settings" using ↑/↓, and press ⊕.

3 Select "Audio Settings" using ↑/↓, and press ⊕.
The "Audio Settings" screen appears.



4 Select an item using ↑/↓, and press ⊕.
The default settings are underlined.

Items	Details
AV SYNC (short) 0 ~ 20 ~ 120 msec (long)	Adjusts the gap between picture and sound, by delaying the sound output in relation to the picture output (0 to 120 milliseconds).
Audio Filter (for analogue audio signals only)	• Sharp: Provides a wide frequency range and spatial feeling. Normally select this. • Slow: Provides smooth and warm sound.

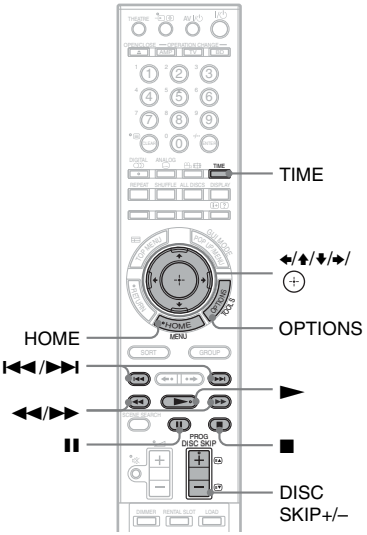
5 Select or adjust the settings using ←/↑/↓/→, and press ⊕.
To adjust any other items, repeat steps 4 and 5.

- The "Audio Filter" function does not work for digital audio signals output from the HDMI OUT/DIGITAL OUT (OPTICAL/COAXIAL) jacks.
- There may be little effect by changing the "Audio Filter" setting depending on the disc or playback environment.

Playing Music CDs

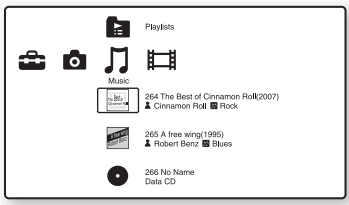
BD *1 DATA DVD *2 CD DATA CD *3

*1 BD-ROMs and BD-REs/BD-Rs containing MP3 audio tracks
*2 DVD-ROMs and DVD+RWs/DVD+Rs/DVD-RWs/DVD-Rs containing MP3 audio tracks
*3 CD-ROMs and CD-RWs/CD-Rs containing MP3 audio tracks

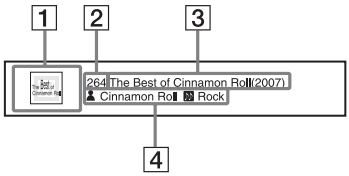


1 Press HOME.

2 Select ♫ (Music) using ←/→.



◆Guide to Disc Information



1 Disc jacket
2 Slot number
3 Album name (Release year)
4 Artist name/♪ Genre

3 Select a disc using ↑/↓, and press ►.

The Music Player screen appears, then playback starts.

To select a track

1 Follow steps 1 to 2 of "Playing Music CDs" (page 44).

2 Select a disc, and press ⊕.
The music list appears.

3 Select a track using ↑/↓.
To play the selected track, press ►.

Available OPTIONS

The options menu appears when you press OPTIONS. The available items differ depending on the situation.

1 Press OPTIONS.
The options menu appears.

2 Select an item using ↑/↓, and press ⊕.

◆Available OPTIONS on the music list screen

Items	Details
Group Content	Displays titles by categories. • All Albums • By Genre • By Artist
Sort By	Changes the title order. • Album Name • Slot Number • Release Year
Play All Discs	Displays options for Play All Discs. • On • Off

Items	Details
Repeat	Displays options for Repeat Play (page 46).
Disc Shuffle	Displays options for Shuffle Play (page 46).
Load All Discs	Loads all disc information (page 51).
Play	Starts playback.
Start	Starts version up (page 65).
Edit	Edits the disc information (page 53).
Load	Loads disc information (page 51).
Eject	Ejects the disc.
Add to Playlist	Creates and edits the Playlist (page 47).
Clear Playlist	
Delete from Playlist	
Move to top	
Move up	
Move down	
Move to bottom	

◆Available OPTIONS during playback

Items	Details
Play All Discs	Displays options of Play All Discs. • On • Off
Disc Shuffle	Displays options for Shuffle Play (page 46).
Repeat	Displays options for Repeat Play (page 46).
Play	Plays the selected track.
Stop	Stops playing the track.
Eject	Ejects the disc.

Various music playback operations

Buttons	Operations
►	Starts playback.
■	Stops playback.
II	Pauses playback.
I◄◄ /►►I	Skips to the beginning of the current or next track. To go to the previous track press I◄◄ twice.
◄◄/►►	Fast reverse/fast forwards when pressed during playback.
TIME	Switches time information on the screen and the front panel display.
DISC SKIP+/–	Changes the disc.

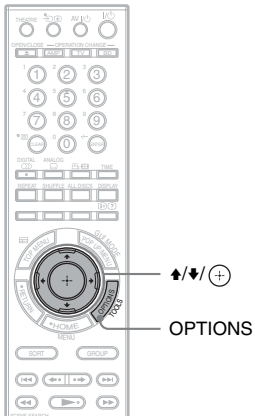
When you press ■, music CD returns to the top of the disc. DATA disc returns to the file of the top of the folder. Playlist returns to the top of creating file.

Playing Music repeatedly

BD *1 DATA DVD *2 CD DATA CD *3

*1 BD-ROMs and BD-REs/BD-Rs containing MP3 audio tracks
*2 DVD-ROMs and DVD+RWs/DVD+Rs/DVD-RWs/DVD-Rs containing MP3 audio tracks
*3 CD-ROMs and CD-RWs/CD-Rs containing MP3 audio tracks

You can play all albums/tracks on a disc, or a single album or track repeatedly.
By selecting All Discs mode (page 44), you can repeat all of the discs in the player.



1 Press OPTIONS.

2 Select “Repeat” using ↑/↓, and press ⊕.

3 Select an item using ↑/↓, and press ⊕.

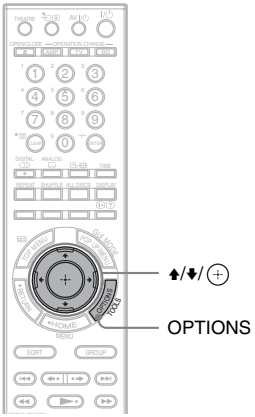
Items	Details
All Tracks	Plays all tracks on a disc repeatedly.
One Track	Plays a track repeatedly.
Off	Disables Repeat Play.

Playing Discs in random order (Shuffle Play)

BD *1 DATA DVD *2 CD DATA CD *3

*1 BD-ROMs and BD-REs/BD-Rs containing MP3 audio tracks
*2 DVD-ROMs and DVD+RWs/DVD+Rs/DVD-RWs/DVD-Rs containing MP3 audio tracks
*3 CD-ROMs and CD-RWs/CD-Rs containing MP3 audio tracks

You can have the player “shuffle” discs.



1 Press OPTIONS.

2 Select “Disc Shuffle” using ↑/↓, and press ⊕.

3 Select an item using ↑/↓, and press ⊕.

Items	Details
On	Plays discs in random order.
Off	Disables Shuffle Play.

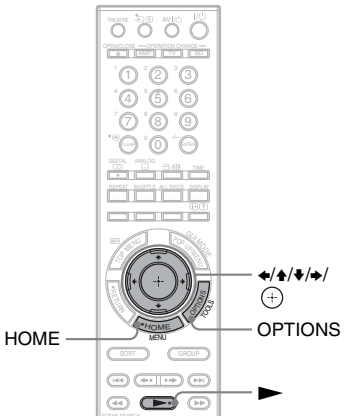
By selecting All Discs mode (page 44), you can shuffle all of the discs in the player.

Creating Playlists

BD *1 DATA DVD *2 CD DATA CD *3

*1 BD-ROMs and BD-REs/BD-Rs containing MP3 audio tracks
*2 DVD-ROMs and DVD+RWs/DVD+Rs/DVD-RWs/DVD-Rs containing MP3 audio tracks
*3 CD-ROMs and CD-RWs/CD-Rs containing MP3 audio tracks

You can create eight Playlists by selecting the tracks of the favourite.



1 Select a track you want to add to a Playlist, and press OPTIONS.
The options menu appears.

2 Select "Add to Playlist" using ↑/↓, and press ⊕.

3 Select a Playlist number using ↑/↓, and press ⊕.
The selected track is added to the Playlist.

To play a Playlist

1 Press HOME and select ♫ (Music) using ←/→.

2 Select (Playlists) using ↑/↓, and press ⊕.

3 Select a Playlist using ↑/↓, and press ►.

To change the playing order

1 Select a Playlist using ↑/↓, and press ⊕.

2 Select a track using ↑/↓, and press OPTIONS.

3 Select an item using ↑/↓, and press ⊕.

Items	Details
Move to top	Moves to top of the Playlist.
Move up	Moves up one track.
Move down	Moves down one track.
Move to bottom	Moves to bottom of the Playlist.

The selected track moves to a new location.

To delete the selected track

You can delete a track or all tracks from a Playlist.

◆To delete one track from a Playlist

1 Select a Playlist using ↑/↓, and press ⊕.

2 Select a track using ↑/↓, and press OPTIONS.

3 Select "Delete from Playlist" using ↑/↓, and press ⊕.

◆To delete all tracks from a Playlist

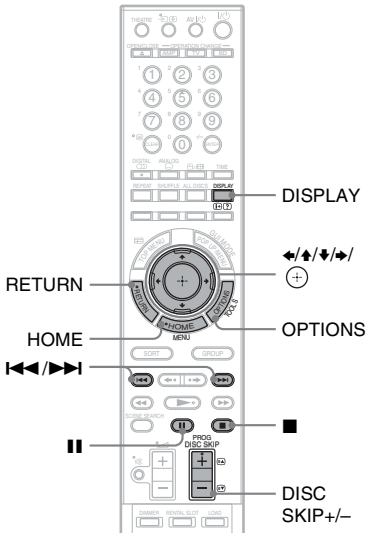
1 Select a Playlist using ↑/↓, and press OPTIONS.

2 Select "Clear Playlist" using ↑/↓, and press ⊕.

Playing Photo Files

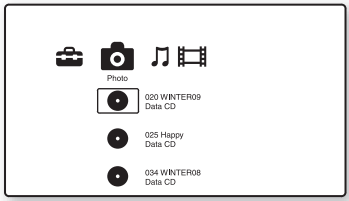
BD *1 DATA DVD *2 DATA CD *3

*1 BD-ROMs and BD-REs/BD-Rs containing JPEG image files
*2 DVD-ROMs and DVD+RWs/DVD+Rs/DVD-RWs/DVD-Rs containing JPEG image files
*3 CD-ROMs and CD-RWs/CD-Rs containing JPEG image files



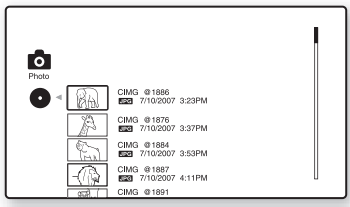
1 Press HOME.

2 Select (Photo) using ←/→.



3 Select a disc, and press ⊕.

The file list or folder list appears.



4 Select a file or folder using ↑/↓, and press ⊕.

When you select a folder, select a file in the folder using ↑/↓, and press ⊕. The selected photo file is displayed.

Available OPTIONS

The options menu appears when you press OPTIONS. The available items differ depending on the situation.

1 Press OPTIONS.
The options menu appears.

2 Select an item using ↑/↓, and press ⊕.

◆Available OPTIONS on the file list screen

Items	Details
Slideshow Speed	Changes the slideshow speed. • Fast • Normal • Slow
Play All Discs	Displays options for Play All Discs. • On • Off
Load All Discs	Loads all disc information.
View Image	Shows a selected photo.
Slideshow	Plays a slideshow.
Edit	Edits disc name (page 54).
Start	Starts version up (page 65).
Load	Loads disc information (page 51).
Eject	Ejects the disc.

◆Available OPTIONS during playback

Items	Details
HD Reality Enhancer	This setting is available only when video signals are output from the HDMI OUT jack or the COMPONENT VIDEO OUT jacks (see ""HD Reality Enhancer" elements" on page 49).
Slideshow Speed	Changes the slideshow speed. • Fast • Normal • Slow
Play All Discs	Displays options for Play All Discs. • On • Off
Stop	Stops a slideshow.
Rotate Left	Rotates a photo counterclockwise by 90 degrees.
Rotate Right	Rotates a photo clockwise by 90 degrees.
Eject	Ejects the disc.

◆"HD Reality Enhancer" elements

1 Select "HD Reality Enhancer" in step 2 above, and press ⊕.

2 Select an item, and press ⊕.

Items	Details
Enhance (–3 ~ 0 ~ 3)	Enhances the scene picture outline pixel by pixel.
Smoothing (Off/Standard/High)	Smooths the gradation on flat parts of the picture.
FGR (0 ~ 3)	Reduces film grain.

The "HD Reality Enhancer" settings are individually set during video and photo playback.

Various photo playback operations

Buttons	Operations
■ RETURN	Stops a slideshow.
II	Pauses a slideshow.
I◀◀ /▶▶I ←/→	Displays the previous or next photo.
DISC SKIP+/–	Changes the disc.
DISPLAY	Displays the file information.

- When you attempt to play the following photo files, the mark appears on the screen and they cannot be played.
  - photo files larger than 8,192 pixels (width or height)
  - photo files smaller than 15 pixels (width or height)
  - photo files exceeding 32 MB
  - photo files with extreme aspect ratios (greater than 50:1 or 1:50)
  - photo files in Progressive JPEG format
  - photo files that have a ".jpeg" or ".jpg" extension, but not in JPEG format
  - photo files that have an extremely long name
- The following photo files cannot be played.
  - photo files recorded on BD-Rs in any format other than UDF (Universal Disk Format) 2.6
  - photo files recorded on BD-REs in any format other than UDF (Universal Disk Format) 2.5
- The following photo files or folders cannot be displayed in the file list or folder list.
  - photo files that have an extension other than ".jpeg" or ".jpg"
  - photo files that have an extremely long name
  - photo files in the 5th tree or lower
  - 501th or more folders when the total number of folders and files in a single tree exceeds 500
- Photo files edited on a PC may not be played.
- Thumbnail images of some photo files may not be displayed.
- Large photo files may take some time to display or to start a slideshow.

➡continued

To view best quality images

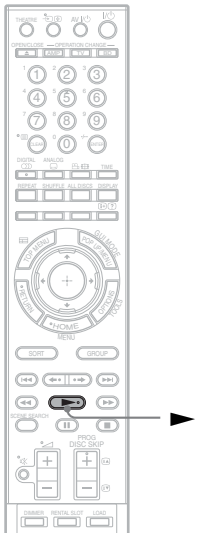
If you have a Sony TV compatible with "PhotoTV HD," you can enjoy best quality images by the following connection and settings.

1. Connect the player to the TV using an HDMI cable (not supplied).
2. Set "HDMI Resolution" of "Output Video Format" to "Auto," "1080i," or "1080p" in the "Video Settings" setup (page 67).
3. Set the TV's video setting to [VIDEO-A] mode.
   For details on [VIDEO-A], refer to the operating instructions supplied with the TV.

Playing a Slideshow

BD *1 DATA DVD *2 DATA CD *3

*1 BD-ROMs and BD-REs/BD-Rs containing JPEG image files
*2 DVD-ROMs and DVD+RWs/DVD+Rs/DVD-RWs/DVD-Rs containing JPEG image files
*3 CD-ROMs and CD-RWs/CD-Rs containing JPEG image files



1. **Follow steps 1 to 4 of "Playing Photo Files" (page 48).**
2. **Press ►.**
   The slideshow starts.

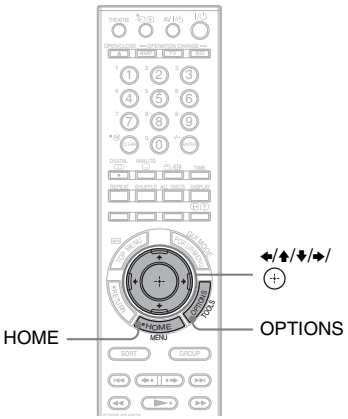
Organizing Discs

Loading the Disc Information

BD DVD CD DATA DVD DATA CD

You can view the disc information by loading discs.

Loading the information of all discs

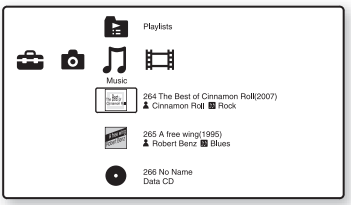


1 **Press HOME.**

2 **Select (Video), (Music), or (Photo) using ←/→, and press OPTIONS.**

3 **Select "Load All Discs" using ↑/↓, and press ⊕.**

The player loads the information of all discs. When loading is completed, the information appears on the screen.



➡continued

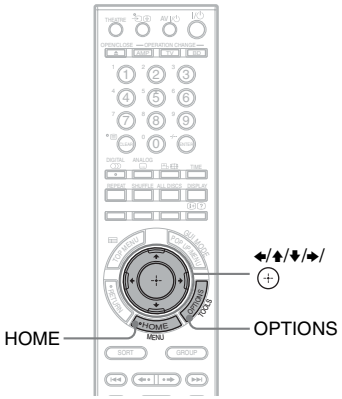
To cancel loading

1 Select “Cancel,” and press ⊕.
The display asks for confirmation.

2 Select “OK” using ←/→, and press ⊕.
“Updating the database.” appears and the loaded data is saved.

When pressing LOAD, the player loads the information of unknown discs.

Loading a disc information

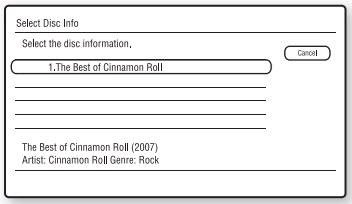


1 Press HOME.

2 Select (Video), (Music), or (Photo) using ←/→.

3 Select a disc using ↑/↓, and press OPTIONS.

4 Select “Load” using ↑/↓, and press ⊕.
The player accesses the Gracenote Database.
When obtaining disc information, information options appear on the screen.


Select Disc Info
Select the disc information.
Cancel
1.The Best of Cinnamon Roll
The Best of Cinnamon Roll (2007)
Artist: Cinnamon Roll Genre: Rock

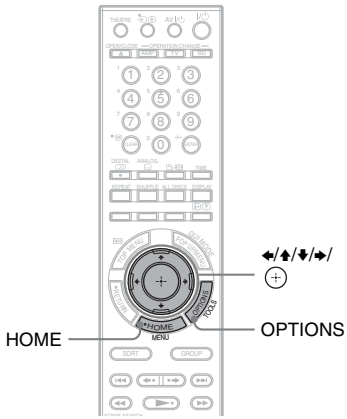
5 Select the desired disc information from options using ↑/↓, and press ⊕.
The information you selected is registered as the disc information.

Editing a Disc/Title/File Information

BD DVD CD DATA DVD DATA CD

You can change the information (such title and artist name) of loaded discs.

Editing the video disc information



1 **Press HOME.**

2 **Select (Video) using ←/→.**

3 **Select a disc using ↑/↓, and press OPTIONS.**

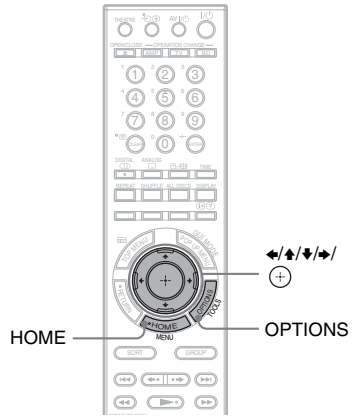
4 **Select "Edit" using ↑/↓, and press ⊕.**

5 **Select the item you want to edit and press ⊕.**
For details about entering characters, see "Entering characters" (page 54).

◆Available OPTIONS

Items	Details
Rename Title/ Rename Disc	Changes the title or disc name.
Change Genre	Changes the genre information.
Re-enter Cast Name	Enters a new name.
Re-enter Director Name	Enters a new name.
Change Release Year	Enters the release year.

Editing the music disc information



1 **Press HOME.**

2 **Select ♫ (Music) using ←/→.**

3 **Select a disc using ↑/↓, and press OPTIONS.**

4 **Select "Edit" using ↑/↓, and press ⊕.**

5 **Select the item you want to edit and press ⊕.**
For details about entering characters, see "Entering characters" (page 54).

◆Available OPTIONS when selecting an audio album

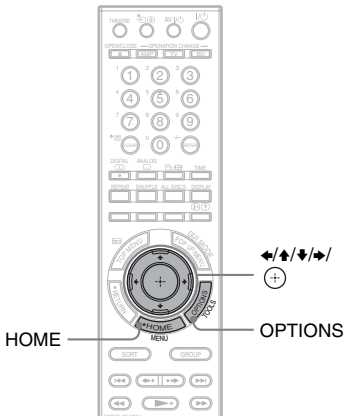
Items	Details
Rename Album/ Rename Disc	Changes the album or disc name.
Change Genre	Changes the genre information.

Items	Details
Re-enter Artist Name	Enters a new name.
Change Release Year	Enters the release year.

◆Available OPTIONS when selecting an audio track

Items	Details
Re-enter Artist Name	Enters a new name.
Rename Track	Changes the track name.

Editing the photo disc name



1 Press HOME.

2 Select (Photo) using ←/→.

3 Select a disc using ↑/↓, and press OPTIONS.

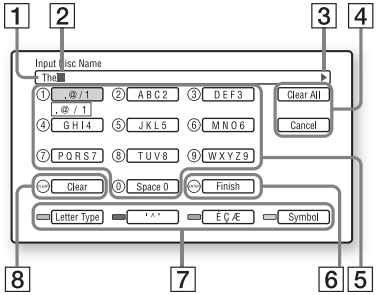
4 Select "Edit" using ↑/↓, and press ⊕.

5 Select "Rename Disc," and press ⊕.

For details about entering characters, see "Entering characters" (page 54).

Entering characters

The display for entering characters appears when you enter a name for a title, album, etc.



1 Entry field
You can enter up to 64 characters for a disc name, a title name, an album name, an artist name, a track name or a genre name.

2 Cursor

3 Scroll mark
Displays when a character string can be scrolled.

4 [Clear All]
Clears all input characters.

[Cancel]
Cancels the setting and returns to the previous display.

5 Number buttons and assigned characters
Each press of the button cycles through the character options.

6 [Finish]
The input is entered and the setting is finished.

7 [Letter Type] (Red button)
Switches between upper case letters, lower case letters and numbers.

[ˋ ^ ¨] (Green button)
Displays for French.

[É Ç Æ](Yellow button)
Displays for French.

[Symbol] (Blue button)
Displays symbols.

8 [Clear]
Erases the character to the right of the cursor. Erases the character to the left of the cursor when no character is to the right of the cursor.

To enter characters using ←/↑/↓/→

Example: To enter "Sea"

1. Select [PQRS7] and press ⊕. Character options appear.
2. Select [S] and press ⊕.
3. Select [DEF3] and press ⊕. Character options appear.
4. Select [e] and press ⊕.
5. Select [ABC2] and press ⊕. Character options appear.
6. Select [a] and press ⊕.
7. Select [Finish] and press ⊕.

To enter characters using number buttons

Example: To enter "Sea"

1. Press "7" four times to select [S].
2. Press the red button to switch to the lower case letters.
3. Press "3" twice to select [e].
4. Press "2" once to select [a].
5. Press ENTER.

Available buttons

Buttons	Details
Red button (Letter Type)	Switches the keyboard between upper case letters, lower case letters and numbers.
Green/yellow buttons	Displays the keyboard for French.
Blue button (Symbol)	Displays the keyboard for symbols.
CLEAR (Clear/Clear All)	Erases the selected character. When holding CLEAR for 2 seconds or more, erase all characters to the right of the cursor. Erases all characters to the left of the cursor when no character is to the right of the cursor.
RETURN (Cancel)	Returns to the previous display, canceling the input.
←/↑/↓/→/⊕	• Select an input function using ←/↑/↓/→, and press ⊕. • Enter characters as follows: ① Select a character selection panel using ←/↑/↓/→, and press ⊕. ② Select a character using ←/→, and press ⊕. • Press ⊕ to return to the previous display after input is complete.

Available characters

Type	Characters
Letters	ABCDEFGHIJKLMNOP QRSTUVWXYZÉÀÈÙÂ ÊÎÔÛËÏÜÇÆ Abcdefghijklmnopqrstuv wxyzéàèùâêîôûëïüçæ
Symbols	. , - ! ? : ‘ & ; “ ` ~ / @ [ ] < > ( ) # * _ | + = % ¥ $ { } ^ £ §

BRAVIA Sync Features

About the BRAVIA Sync Features (HDMI connections only)

By connecting Sony components that are compatible with the "Control for HDMI" function with an HDMI cable (not supplied), operation is simplified as below:

- One-Touch Play
  With one touch of the following buttons, the connected TV turns on and the input selector on the TV is switched to the player automatically.
  – I/⏻
  – ►: Playback starts automatically.
- System Power-Off
  When you turn off the TV using the power button on the TV's remote, the player and HDMI-compatible components turn off automatically.
- Theatre
  When you press THEATRE, the player automatically switches to the optimum video mode for watching movies. When connected with an AV amplifier (receiver) using an HDMI cable, the speaker output also switches automatically. When connected with a Theatre Mode-compatible TV using an HDMI cable, the TV's video mode switches to Theatre Mode. Press the button again to return to the original setting.
- Language Follow
  If you change the language for the on-screen display on your TV, the player's on-screen display language is also changed after turning the player off and on.

To prepare for the BRAVIA Sync features

Set "Control for HDMI" to "On" in the "System Settings" setup (page 76).
For details on settings of your TV or other connected components, refer to the operating instructions supplied with the TV or components.

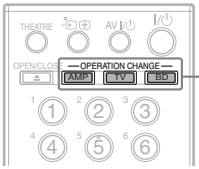
- When connecting a Sony TV that is compatible with the “Control for HDMI” Easy Setting function using an HDMI cable, the “Control for HDMI” setting of the player automatically switches to “On” if the “Control for HDMI” setting on the connected TV is set to “On.” Refer to the operating instructions supplied with the TV.
- When connecting a Sony TV that is compatible with the BRAVIA Sync features using an HDMI cable, you can control the basic functions of the player with the TV’s remote if the “Control for HDMI” setting on the connected TV is set to “On.” Refer to the operating instructions supplied with the TV.

- Depending on the connected component, the “Control for HDMI” function may not work. Refer to the operating instructions supplied with the component.
- When using the HDMI connection, there may be a delay before the playback picture appears on the screen, and the beginning portion of the playback picture may not be displayed.

Remote Control Features

Operating the Player and Other Components

You can operate this player, a TV or AV amplifier using the supplied remote.
The remote is factory set to control Sony components. If you have other components listed in the table on page 60, change the remote code to control them (page 60).



1 Press one of the OPERATION CHANGE buttons to select the operation mode.

BD for the player operation
TV for TV operation
AMP for Sony AV amplifier operation

The remote enters the selected mode and the pressed button lights up for one second.

2 Press a button on the remote that is available for the selected mode.

The selected mode button lights up.

Available buttons

You can use the following buttons to control each component.

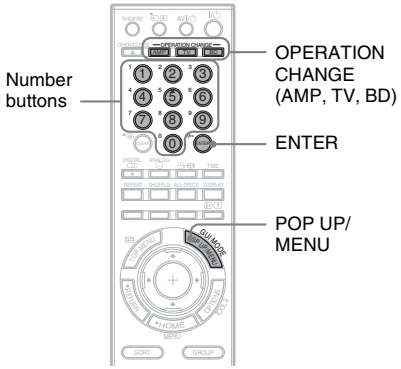
- Depending on the manufacturer setting, some buttons may not work.
- Depending on the component, control of some or all buttons may not be possible.
- When you press buttons not available for the selected mode, the mode button does not light up.

Buttons	BD	TV	AMP
THEATRE		●	
⏻TV/⏻AMP		●	●
AV I/⏻		●	●
I/⏻	●		
⏏ OPEN/CLOSE	●		
Number buttons	●	●	●
CLEAR/☰	●	●	
ENTER/-/--	●	●	
◯◯/DIGITAL	●	●	●
💬/ANALOG	●	●	
🎥/🎞	●	●	
TIME	●		
REPEAT	●		
SHUFFLE	●		
ALL DISCS	●		
DISPLAY/ⓘ/?	●	●	●
Colour buttons	●		
TOP MENU/▤	●	●	
POP UP/MENU/ GUI MODE	●		●
RETURN	●	●	●
OPTIONS/ TOOLS	●	●	●
HOME/MENU	●	●	●
←/↓/↑/→/⊕	●	●	●
SORT	●		
GROUP	●		
I◀◀/▶▶I	●	●	
←•/•→	●	●	
◀◀/▶▶	●	●	
►	●	●	
SCENE SEARCH	●		
❚❚	●	●	
■	●	●	
🔇		●	●
🔊		●	●
DISC SKIP/📖▲/📖▼	●	●	
DIMMER	●		
RENTAL SLOT	●		
LOAD	●		

Changing the Remote Code to Operate Other Components

To operate other components by the supplied remote, set the appropriate manufacture's code for each operation mode.

When you replace the batteries of the remote, the code number may be reset to the default setting. Set the appropriate code number again.



1 Press POP UP/MENU while pressing one of the OPERATION CHANGE buttons.

TV for TV operation
AMP for Sony AV amplifier operation
BD for volume control of a TV (default) or AV Amplifier

The pressed button flashes.

2 While the button is flashing, enter the manufacturer's code number using the number buttons, then press ENTER.

See "Code numbers of controllable components" (page 60). Note that the code number for BD differs depending on the command mode set for the player. If you successfully set the manufacturer's code, the button will flash twice slowly. If the setting is unsuccessful, the button will flash five times quickly.

Code numbers of controllable components

If more than one code number is listed, try entering them one at a time until you find one that works with the component.

◆For TV mode

Manufacturer	Code number
Sony	501 (default), 502
Daewoo	503, 506, 515, 544
Emerson	567
Funai	548
GE	503, 509, 510, 544
Goldstar/LG	503, 515, 517, 544, 568
Grundig	533
Hitachi	503, 514, 515, 517, 544, 557, 571
ITT/Nokia	521, 522
JVC	516
Loewe	515, 518
Mitsubishi/MGA	503, 527, 544, 566, 568
NEC	503, 517, 544, 564, 566
Nokia	521, 522, 573, 575
Panasonic	509, 553, 572
Philips	515, 518, 557, 570, 571
Pioneer	509, 526, 551
Radio Shack	503, 510, 527, 565, 567
RCA/Proscan	503, 510, 544
Saba	530, 537, 547, 549, 558
Samsung	503, 515, 517, 544, 557, 566, 569, 571, 574
Sanyo	508, 545, 567
Sharp	517, 535, 565
Telefunken	530, 537, 547, 549, 558
Thomson	530, 537, 547, 549
Toshiba	535, 541, 551
Zenith	543, 567

◆For AMP mode

Manufacturer	Code number
Sony	011, 012 (default), 013

◆For BD mode

You can set ⊿ +/– and 🔇 [*1] to control the volume of either a TV (default) or AV amplifier. Select a code number appropriate to the command mode set for the player.

[*1] For TVs and Sony AV amplifiers only.

Command mode BD1

Manufacturer	Code number
Sony	321, 322, 323
Denon	327, 328, 329
Kenwood	331, 332
Onkyo	324, 325, 326
Panasonic	336, 337
Pioneer	338
Sansui	330
Yamaha	333, 334, 335
(TV)	310[*2] (default)

Command mode BD2

Manufacturer	Code number
Sony	341, 342, 343
Denon	347, 348, 349
Kenwood	351, 352
Onkyo	344, 345, 346
Panasonic	356, 357
Pioneer	358
Sansui	350
Yamaha	353, 354, 355
(TV)	311[*2] (default)

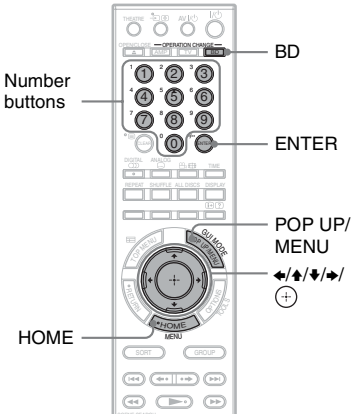
Command mode BD3

Manufacturer	Code number
Sony	361, 362, 363
Denon	367, 368, 369
Kenwood	371, 372
Onkyo	364, 365, 366
Panasonic	376, 377
Pioneer	378
Sansui	370
Yamaha	373, 374, 375
(TV)	312[*2] (default)

[*2] You can control the volume of the TV that you set for TV mode.

Changing the Command Mode

When you have more than one Sony Blu-ray Disc/DVD player, the supplied remote may interfere with another player. In this case, change the command mode for this player and the supplied remote to one that differs from the other player.
The default command mode for this player and the supplied remote is BD1.



To switch the command mode for the player

1. Press HOME to display the home menu.
2. Select (Setup) using ←/→.
3. Select "System Settings" using ↑/↓, and press ⊕.
4. Select "Command Mode," and press ⊕.
5. Select a command mode (BD1, BD2, or BD3), and press ⊕.
   The display asks for confirmation.
6. Select "Yes," and press ⊕.
   The command mode for the player is changed to the one you set in step 5.

To switch the command mode for the remote

Set the command mode for the remote so it matches the command mode you set in step 6 above (for the player).

1. Press POP UP/MENU while pressing down BD.
2. While BD is flashing, enter the 3-digit code number using the number buttons, then press ENTER.

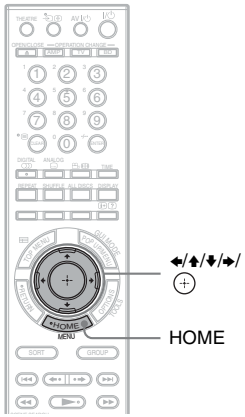
Command mode	Code number
BD1	310
BD2	311
BD3	312

If the command mode for the player does not match the remote, the command mode for the player appears on the front panel display when you try to operate the remote.

Settings and Adjustments

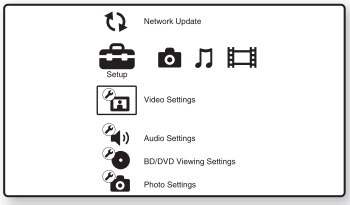
Using the Settings Display

Select (Setup) on the home menu when you need to change the settings of the player.

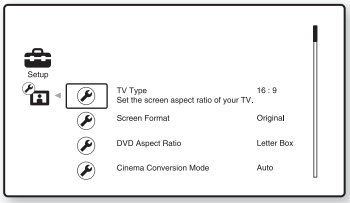


1 **Press HOME.**

2 **Select (Setup) using ←/→.**



3 **Select the setup category icon to change using ↑/↓, and press ⊕.**
For details on setting options and setup category icons, see “Setting list” (page 64).
Example: Video Settings



4 **Set the options.**

➡continued

Setting list

You can set up the following options.

Icon	Explanation
	Network Update (page 64) Updates the software of the player.
	Video Settings (page 65) Makes the video settings according to the type of connecting jacks.
	Audio Settings (page 69) Makes the audio settings according to the connection used.
	BD/DVD Viewing Settings (page 73) Makes detailed settings for BD/DVD playback.
	Photo Settings (page 76) Makes photo-related settings.
	System Settings (page 76) Makes player-related settings.
	Network Settings (page 78) Makes detailed Internet and network settings.
	Easy Setup (page 79) Re-runs Easy Setup to make basic settings.
	Resetting (page 80) Resets the player to the factory defaults.

Network Update

You can update and improve the functions of the player.
For information about update functions, refer to the following website:
http://support.sony-europe.com/

1 **Select “Network Update” using ↑/↓, and press ⊕.**
The player connects to the network, and the display asks for confirmation.

2 **Select “OK” using ←/→, and press ⊕.**
The player starts downloading, then updates the software automatically. When updating finishes, “FINISH” appears for 5 seconds in the front panel display, then the player automatically turns off.

3 **Press I/⏻ to turn on the player.**
The player starts up with the updated software.

- The “VERSION UP */9” counter (“*” indicates the total number of updates performed) in the front panel display also shows update progress.
- You can check the current software version by selecting “System Information” in the “System Settings” setup (page 78).
- The “Setup” settings remain after updating.
- The player informs you of newer software version information when “Software Update Notification” is set to “On” (default) (page 77).

- Do not disconnect the mains lead (AC power cord) or network cable while downloading or updating software.
- Any operations, including opening the front cover, are not available while updating.
- Downloading times may differ depending on the server provider or line status.
- When error messages on network connections appear, check the network settings (see “Internet Settings” on page 78).

To update the software using an update disc

You can update and improve the functions of the player using an update disc provided by Sony dealers or local authorized Sony service facilities.

1. Insert the update disc.
2. Select "Other Discs," and press ⊕.
3. Select the update disc using ↑/↓, and press ⊕.
   The display asks for confirmation.
4. Select "OK," and press ⊕.
   The update progress is displayed in the front panel display. When updating finishes, the player automatically turns off.
5. Press I/⏻ to turn the player on.
   The player starts up with the updated software.

- You can check the current software version by selecting "System Information" in the "System Settings" setup (page 78).
- The "Setup" settings remain after updating.
- For information about other software update methods, refer to the following website or consult your nearest Sony dealer or local authorized Sony Service facility:
  http://support.sony-europe.com/

- Do not disconnect the mains lead (AC power cord) while updating.
- Any operations, including front panel buttons, are not available while updating.

Video Settings

The default settings are underlined.

TV Type

Selects your TV type.

16:9	Select this when connecting to a wide-screen TV or a TV with a wide mode function.
4:3	Select this when connecting to a 4:3 screen TV without a wide mode function.

Screen Format

Selects the display configuration for a 4:3 screen picture on a 16:9 wide screen TV.

Original	Select this when connecting to a TV with a wide mode function. Displays a 4:3 screen picture in 16:9 aspect ratio even on a wide-screen TV.
Fixed Aspect Ratio	Changes the picture size to fit the screen size at the original picture aspect ratio.

DVD Aspect Ratio

Selects the display configuration for playback of 16:9 screen pictures on a 4:3 screen TV (available when "TV Type" is set to "4:3" and "Screen Format" is set to "Fixed Aspect Ratio").

Letter Box	Displays a wide picture with black bands at the top and bottom.
Pan & Scan	Displays a full-height picture on the entire screen, with trimmed sides.

Letter Box

Pan & Scan

Depending on the DVD, "Letter Box" may be selected automatically instead of "Pan & Scan," or vice versa.

Cinema Conversion Mode

Sets the video conversion method for 480p/576p, 720p, 1080i, or 1080p* signals from the HDMI OUT jack or the COMPONENT VIDEO OUT jacks.

* HDMI only

Auto	Normally select this. The player automatically detects whether the material is video-based or film-based, and switches to the appropriate conversion method.
Video	The conversion method suited for video-based material will always be selected regardless of the material.

Output Video Format

Selects the jack type to output video signals ("TV Connection Method") and output resolution ("HDMI Resolution"/"Component Resolution").

1 Select "Output Video Format" in "Video Settings," and press ⊕.

2 Select the jack type to output video signals using ↑/↓, and press ⊕.

When connecting the HDMI OUT jack and other video output jacks at the same time, select "Component Video."

TV Connection Method

HDMI	Outputs signals from the HDMI OUT jack according to the "HDMI Resolution" setting below.
Component Video	Outputs signals from the COMPONENT VIDEO OUT jacks according to the "Component Resolution" setting below.
Video or S Video	Outputs signals from the VIDEO OUT VIDEO or S VIDEO jack.

3 (Setting "HDMI" or "Component Video" only)
Select the signal type for the HDMI OUT jack or COMPONENT VIDEO OUT jacks using ↑/↓, and press ⊕.
When you change the video output resolution, a picture is displayed in the selected resolution for about 30 seconds, then the display asks for confirmation. Follow the on-screen instructions.

The HD indicator lights up when outputting 720p/1080i/1080p video signals.

- If the picture is distorted or no picture appears, wait for about 30 seconds without pressing any buttons. The display returns to the resolution setting screen.
  If the selected video output resolution is incorrect, no picture will appear on the screen when you press any button within that 30 seconds. In this case, press ■ on the player for more than 10 seconds to reset the video output resolution to the lowest resolution.
- When connecting the HDMI OUT jack and other video output jacks at the same time with "Auto" or "1080p" selected, video signals may only output from the HDMI OUT jack.
  When connecting other equipment at the same time, press RETURN to return to step 2, and change the "TV Connection Method" setting.

HDMI Resolution/Component Resolution

Auto (HDMI only)	Normally select this. The player outputs signals starting from the highest resolution acceptable by the TV: 1080p > 1080i > 720p > 480p/576p > 480i/576i If the resulting image format is undesirable, try another setting that suits your TV.
480i/576i	Outputs 480i/576i video signals.
480p/576p	Outputs 480p/576p video signals.
720p	Outputs 720p video signals.
1080i	Outputs 1080i video signals.
1080p (HDMI only)	Outputs 1080p video signals.

BD-ROM 1080/24p Output

Sets to output 1920 × 1080p/24 Hz video signals when playing film-based materials on BD-ROMs (720p/24 Hz or 1080p/24 Hz). 1920 × 1080p/24 Hz video signals can be output when all of the following conditions are met.

– You connect a 1080/24p-compatible TV using the HDMI OUT jack,
– "Output Video Format" is set to "HDMI," and
– "HDMI Resolution" is set to "Auto" or "1080p."

The 24P indicator lights up when outputting 1920 × 1080p/24 Hz video signals.

Auto	Outputs 1920 × 1080p/ 24 Hz video signals only when connecting a 1080/ 24p-compatible TV using the HDMI OUT jack.
On	Outputs 1920 × 1080p/ 24 Hz video signals regardless of the connected TV type.
Off	Select this when your TV is not compatible with 1080/ 24p video signals.

No BD-ROM picture appears if the connected TV is not compatible with 1080/24p, and "BD-ROM 1080/24p Output" is set to "On." In this case, press HOME to display the home menu, and change the "BD-ROM 1080/24p Output" setting.

➡continued

YCbCr/RGB (HDMI)

Sets the colour for video signals output from the HDMI OUT jack. Select the setting that matches the connected TV type.

Auto	Automatically detects the connected TV type, and switches to the matching colour setting.
YCbCr (4:2:2)	Outputs YCbCr 4:2:2 video signals.
YCbCr (4:4:4)	Outputs YCbCr 4:4:4 video signals.
RGB (16-235)	Select this when connecting to a device that only supports RGB limited range.
RGB (0-255)	Select this when connecting to an RGB (0-255) device.

HDMI Deep Colour Output

Sets Deep Colour (colour depth) for video signals output from the HDMI OUT jack. The colour depth is indicated by the number of bits, and more colours can be reproduced as the value increases. The player supports a colour depth of up to 12 bits. Connecting the player and a TV that supports Deep Colour allows for more accurate colour reproduction than when connecting it to a TV that does not support Deep Colour.

Auto	Normally select this.
12bit	Outputs 12bit video signals.
10bit	Outputs 10bit video signals.
Off	Select this when the picture is unstable or colours appear unnatural.

SBM

Sets whether to use the Super Bit Mapping (only for video signals output from the HDMI OUT jack).

On	Smoothly reproduces the video image signal. Normally select this.
Off	Turns off the function.

x.v.Colour Output

Sets whether to send xvYCC information to the connected TV.
Combining xvYCC-compatible video with a TV that supports x.v.Colour display accurately reproduces object colours present in nature.

Auto	Normally select this.
Off	Select this when the picture is unstable or colours appear unnatural.

Pause Mode

Sets the picture mode for DVD playback pause status. For BD-ROMs, “Pause Mode” automatically switches to “Auto.”

Auto	Normally select this. Dynamic moving pictures appear without blurring.
Frame	Displays static pictures at high resolution.

Component output compensation

If the video coaxial cable used to connect the COMPONENT VIDEO OUT jacks of the player and your TV is too long, 1080i/720p signals are weakened during transmission over the cable (high frequency transmission cable loss). This function compensates for such high frequency transmission cable loss.

Off	Turns off the function.
1 ~ 7	Select the appropriate numeric value depending on the length of the connected coaxial cable. The compensation amount increases by approximately 0.4 dB (at 30 MHz) for each step increase.

- Performance and features are not guaranteed.
- If your type of connecting cables or connectors differs from those recommended, optimum performance may not be achieved.
- If settings are higher than those recommended, fine details on the screen may become too harsh.

Audio Settings

The default settings are underlined.

Audio Output Priority

Selects the jack type to output audio signals. 2-channel linear PCM signals are output at 48 kHz maximum from output jacks other than the priority jacks.

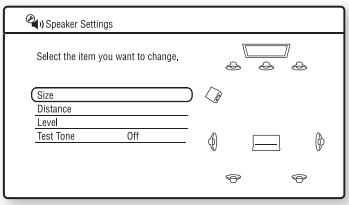
HDMI	Outputs audio signals from the HDMI OUT jack.
Coaxial/ Optical	Outputs audio signals from the DIGITAL OUT (OPTICAL/COAXIAL) jack.
Multi Channel Analogue	Select this when connecting an AV amplifier (receiver) via the MULTI CHANNEL OUTPUT jacks.
Stereo Analogue	Outputs audio signals from the AUDIO OUT (L/R) jacks.

Speaker Settings

To obtain the best possible surround sound, set for the type of speakers you are using, and their distance from your listening position, then use the test tone to adjust the volume and the balance of the speakers.
This setting is available when "Audio Output Priority" is set to "Multi Channel Analogue."

To set the speakers

1 Select "Speaker Settings" in "Audio Settings," and press ⊕.



2 Select "Size," "Distance," and press ⊕.

3 Select a setup item using ↑/↓, and press ⊕.

4 Select and adjust settings using ↑/↓, and then pressing ⊕.

◆Size
Selects the size of the speakers.
• Front

Large	Normally select this position.
Small	Select this when the speakers cannot reproduce adequate low frequencies.

• Centre

Large	Normally select this position.
Small	Select this when the speaker cannot reproduce adequate low frequencies.
None	Select this if you do not connect a centre speaker.

• Surround

Large	Normally select this position.
Small	Select this when the speakers cannot reproduce adequate low frequencies.
None	Select this if you do not connect surround speakers.

• Surround Back

Large	Normally select this position.
Small	Select this when the speakers cannot reproduce adequate low frequencies.
None	Select this if you do not connect surround back speakers.

➡continued

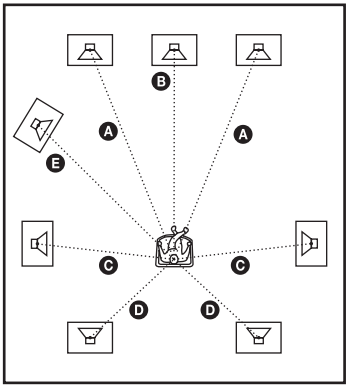
• Subwoofer

Yes	Select this if you connect a subwoofer to output the LFE (low frequency effect) signals from the subwoofer.
None	Select this if you do not connect a subwoofer.

- Depending on the settings of other speakers, the subwoofer may output excessive sound.
- If you play a BD or DVD that does not have subwoofer signal recorded, no sound will be produced from the subwoofer, even if "Subwoofer" is set to "Yes."
- Since subwoofer use is set as the player default setting, "Subwoofer" cannot be set to "None" when "Front" is set to "Small."
- When connecting front speakers that cannot reproduce adequate low frequencies and a subwoofer is not connected, set "Front" to "Large," and "Subwoofer" to "None."

◆Distance

Sets the distance from your listening position to the speakers.
Set the distance to your front speakers in "Front" first (Ⓐ = 1.0 m to 15.0 m). Then adjust the values in "Centre" (centre speaker Ⓑ), "Surround" (surround speakers Ⓒ), "Surround Back" (surround back speakers Ⓓ), and "Subwoofer" (Ⓔ) to reflect the actual distance to your centre speaker, surround speakers, surround back speakers, and subwoofer.



Change the "Distance" setting each time you move the speakers. Start from the front speakers.

Front	Set this between 1.0 metre and 15.0 metres in 0.2 metre increments. (1.0 ~ 3.0 ~ 15.0 [m])
Centre	Set this within –1.6 metres and +0.6 metres of the "Front" setting in 0.2 metre increments. For example, if "Front" is set to 1.6 metres, "Centre" can be set between 0 metres and 2.2 metres. (0 ~ 3.0 ~ 15.6 [m])
Surround	Set this within –5.0 metres and +0.6 metres of the "Front" setting in 0.2 metre increments. For example, if "Front" is set to 5.0 metres, "Surround" can be set between 0 metres and 5.6 metres. (0 ~ 3.0 ~ 15.6 [m])
Surround Back	Set this within –5.0 metres and +0.6 metres of the "Front" setting in 0.2 metre increments. For example, if "Front" is set to 5.0 metres, "Surround Back" can be set between 0 metres and 5.6 metres. (0 ~ 3.0 ~ 15.6 [m])
Subwoofer	Set this within –1.6 metres and +0.6 metres of the "Front" setting in 0.2 metre increments. For example, if "Front" is set to 1.6 metres, "Subwoofer" can be set between 0 metres and 2.2 metres. (0 ~ 3.0 ~ 15.6 [m])

To adjust the speaker level

1. Select “Speaker Settings” in “Audio Settings,” and press ⊕.
2. Select “Test Tone” using ↑/↓, and press ⊕.
3. Select “On” using ↑/↓, and press ⊕. You will hear the test tone from each speaker in sequence.
4. From your listening position, adjust the value of “Level” using ←/↑/↓/→. The test tone is emitted from the selected speaker.
5. Press ⊕ when you finish adjusting.
6. Select “Test Tone” using ↑/↓, and press ⊕.
7. Select “Off” using ↑/↓, and press ⊕.

To adjust the level without listening to the test tone, select “Level” in step 2 and press ⊕, then adjust the level using ↑/↓, and press ⊕.

◆Level

You can vary the level of each speaker as follows. Be sure to set “Test Tone” to “On” for easy adjustment.

Front Left Front Right	Adjust the level of the front speakers (–12 dB to 0 dB, 0.5 dB increments). (0 [dB])
Centre	Adjust the level of the centre speaker (–12 dB to 0 dB, 0.5 dB increments). (0 [dB])
Surround Left Surround Right	Adjust the level of the surround speakers (–12 dB to 0 dB, 0.5 dB increments). (0 [dB])
Surround Back Left Surround Back Right	Adjust the level of the surround back speakers (–12 dB to 0 dB, 0.5 dB increments). (0 [dB])
Subwoofer	Adjust the level of the subwoofer (–12 dB to 0 dB, 0.5 dB increments). (0 [dB])

◆Test Tone

On	The player emits a test tone in sequence from the MULTI CHANNEL OUTPUT jacks to adjust the sound level from each speaker. When you select one of the “Speaker Settings” items, the test tone is emitted from the selected speaker.
Off	The test tone is not emitted from the speakers.

Audio (HDMI)

Selects the signal type for the HDMI OUT jack.

Auto	Normally select this. Outputs audio signals according to the status of the connected HDMI device.
2ch PCM	Downmixes to 2-channel Linear PCM signals before outputting from the HDMI OUT jack.

Select “2ch PCM” when connecting a TV or an AV amplifier (receiver) that does not support Dolby Digital or DTS, otherwise noise or no sound may result.

BD Audio Setting

Selects whether to mix or not mix interactive audio and secondary audio (commentary) when playing a BD that contains such audio.

Mix	Mixes the interactive and secondary audio as primary audio.
Direct	Outputs the primary audio only.

PCM 96 kHz and PCM 192 kHz audio signals are output as PCM 48 kHz audio signals when “BD Audio Setting” is set to “Mix.”

➡continued

Audio ATT

Lowers the audio output level to prevent sound distortion.

On	Enables Audio Attenuation.
Off	Disables Audio Attenuation.

"Audio ATT" does not affect the output from the HDMI OUT jack or DIGITAL OUT (OPTICAL/COAXIAL) jack.

Dolby Digital

Selects the audio signals output when playing Dolby Digital discs.
This setting affects the output from the DIGITAL OUT (COAXIAL/OPTICAL) jack.

Downmix PCM	Converts to output Linear PCM signals. Select this when connecting an audio device without a built-in Dolby Digital decoder.
Dolby Digital	Select this when connecting an audio device with a built-in Dolby Digital decoder.

DTS

Selects the audio signals output when playing DTS discs. This setting affects the output from the DIGITAL OUT (COAXIAL/OPTICAL) jack.

Downmix PCM	Converts to output Linear PCM signals. Select this when connecting to an audio device without a built-in DTS decoder.
DTS	Select this when connecting to an audio device with a built-in DTS decoder.

48kHz/96kHz PCM

Selects the maximum sampling frequency for the PCM signals output from the DIGITAL OUT (OPTICAL/COAXIAL) jack.

48kHz/16bit	Outputs audio signals of 96 kHz sampling as 48 kHz/16 bit.
96kHz/24bit	Outputs audio signals of 96 kHz sampling as 96 kHz/24 bit. However, the signals will be output as 48 kHz/16 bit if the source is copy-protected.

- If you select "96kHz/24bit" when an AV amplifier (receiver) that does not support 96 kHz is connected, no sound or a loud sound may result.
- "48kHz/96kHz PCM" is not effective when "Audio Output Priority" is set to "HDMI," "Multi Channel Analogue," or "Stereo Analogue."

Audio DRC

Selects the dynamic range (compression level of the sound) setting when playing a BD or DVD that conforms to "Audio DRC."

Auto	Performs playback at the dynamic range specified by the disc (BD-ROM only). Other discs are played back at the "Standard" level.
Standard	Performs playback at a compression level between "TV Mode" and "Wide Range."
TV Mode	Sounds are compressed heavily. Low sounds are easier to hear.
Wide Range	No compression works. A more dynamic sound is produced.

- "Audio DRC" is effective only when playing Dolby Digital, Dolby Digital Plus, and Dolby TrueHD audio signals.
- When "Dolby Digital" is set to "Dolby Digital" in the "Audio Settings" setup (page 72), "Audio DRC" has no effect on the audio output from the DIGITAL OUT (OPTICAL/COAXIAL) jack. However, this excludes the following cases.
  – when "BD Audio Setting" is set to "Mix" when playing a BD.
  – when "Audio Output Priority" is set to "HDMI," "Multi Channel Analogue," or "Stereo Analogue."

Downmix

Sets the downmix method of multi-channel to two-channel sound.

Dolby Surround	Outputs the Dolby Surround (Pro Logic) signals in 2 channels. Select this when connecting an audio device that supports Dolby Surround (Pro Logic).
Normal	Outputs audio signals without Dolby Surround (Pro Logic) effect. Select this when connecting an audio device that does not support Dolby Surround (Pro Logic).

"Downmix" has no effect on the bitstream audio output from the DIGITAL OUT (OPTICAL/COAXIAL)/HDMI OUT jack.

BD/DVD Viewing Settings

The default settings are underlined.

BD/DVD Menu

Selects the default menu language for BD-ROMs or DVD VIDEOs.
When you select "Select Language Code," the display for entering the language code appears. Enter the code for your language by referring to "Language Code List" (page 91).

Audio

Selects the default track language for BD-ROMs or DVD VIDEOs.
When you select "Original," the language given priority in the disc is selected.
When you select "Select Language Code," the display for entering the language code appears. Enter the code for your language by referring to "Language Code List" (page 91).

Subtitle

Selects the default subtitle language for BD-ROMs or DVD VIDEOs.
When you select "Select Language Code," the display for entering the language code appears. Enter the code for your language by referring to "Language Code List" (page 91).

BD Parental Control

Playback of some BD-ROMs can be limited according to the age of the user. Scenes may be blocked or replaced with different scenes.

1 Select "BD Parental Control" in "BD/DVD Viewing Settings," and press ⊕.

2 Enter your four-digit password using the number buttons.

3 Select "OK," and press ⊕.

4 Select the age restriction, and press ⊕.

The lower the value, the stricter the limitation.

If you select "Select Age Restriction," you can enter a value from "0" to "255" using ←/↑/↓/→ or the number buttons.

- To cancel the Parental Control setting, select "No Restrictions."

You can change the password (see "Password" on page 75).

- The password is not reset even if you reset the player (page 80). Keep a note of your password.
- Discs that do not have the Parental Control function cannot be limited on this player.
- Depending on the disc, you may be asked to change the Parental Control level while playing the disc. In this case, enter your password, then change the level.
- When "255" is selected in "Select Age Restriction," the Parental Control setting is cancelled.

To play restricted BDs

When you play a restricted BD, change the setting or enter the age in "Select Age Restriction."

DVD Parental Control

Playback of some DVD VIDEOs can be limited according to the age of the users. Scenes may be blocked or replaced with different scenes.

1 Select "DVD Parental Control" in "BD/DVD Viewing Settings," and press ⊕.

2 Enter your four-digit password using the number buttons.

3 Select "OK," and press ⊕.

4 Select a level, and press ⊕.

The lower the value, the stricter the limitation.

- To cancel the Parental Control setting, select "No Restrictions."

You can change the password (see "Password" on page 75).

- The password is not reset even if you reset the player (page 80). Keep a note of your password.
- Discs that do not have the Parental Control function cannot be limited on this player.
- Depending on the disc, you may be asked to change the Parental Control level while playing the disc. In this case, enter your password, then change the level.

To play restricted DVDs

When you play a restricted DVD, the display for entering your password appears on the screen. Enter your four-digit password using the number buttons, and press ENTER. Playback starts.

Parental Control Region Code

Playback of some BD-ROMs or DVD VIDEOs can be limited according to geographic area. Scenes may be blocked or replaced with different scenes.

1 Select "Parental Control Region Code" in "BD/DVD Viewing Settings," and press ⊕.

2 Enter your four-digit password using the number buttons.

3 Select "OK," and press ⊕.

4 Select the area restriction, and press ⊕.

When you select "Select Region Code," the display for entering the region code appears. Enter the code for the area restriction by referring to "Parental Control/Area Code" (page 91).

You can change the password (see "Password" on page 75).

- The password is not reset even if you reset the player (page 80). Keep a note of your password.
- Discs that do not have the Parental Control function cannot be limited on this player.
- Depending on the disc, you may be asked to change the Parental Control level while playing the disc. In this case, enter your password, then change the level.

Password

Sets or changes the password for the Parental Control function. A password allows you to set a restriction on BD-ROM or DVD VIDEO playback. If necessary, you can differentiate the restriction levels for BD-ROMs and DVD VIDEOs.

1 Select "Password" in "BD/DVD Viewing Settings," and press ⊕.

2 Enter your four-digit password using the number buttons.

3 Select "OK," and press ⊕.

To change the password

1 After step 3, enter a new password using the number buttons.

2 Select "OK," and press ⊕.

The password is not reset even if you reset the player (page 80). Keep a note of your password.

Hybrid Disc Playback Layer

Selects the layer priority when playing a Hybrid Disc. To change the setting, turn the player off and on again.

BD	Plays BD layer.
DVD/CD	Plays DVD or CD layer.

BD Internet Connection

Sets whether to allow Internet connections from the contents of a BD (in BDMV mode) being played. Network connections and settings are required when using this function (page 78).

Allow	Normally select this.
Do not allow	Prohibits Internet connection.

Playback Memory

When you play BDs[*1]/DVDs[*2], the player stores picture settings for each disc, letting you play the same disc with the same settings later. The player can store picture settings for up to 50 discs.

[*1] BD-ROMs and BD-REs/BD-Rs in BDMV mode
[*2] DVD VIDEOs and DVD-RWs/DVD-Rs/DVD+RWs/DVD+Rs in video mode

On	Stores picture settings for each disc.
Off	Turns off the function.

- When settings exceed 50, the player automatically erases the oldest settings.
- When connected to a Theatre Mode-compatible Sony TV using an HDMI cable, set the TV's video mode to a mode other than Theatre.

Photo Settings

The default setting is underlined.

Slideshow Speed

Changes the slideshow speed.

Fast	Photos change rapidly.
Normal	Photos change at normal speed.
Slow	Photos change slowly.

System Settings

The default settings are underlined.

OSD

Selects your language for the player on-screen displays.

Dimmer

Adjusts the lighting of the front panel display.

Bright	Bright lighting.
Dark	Low lighting.
Off	Turns off the lighting during playback. Low lighting other than during playback.

Control for HDMI

On	Allows you to use the "Control for HDMI" function (page 56).
Off	Turns off the function.

Custom Installation Control

Communicates with an external device via RS232C or a network.

RS232C	Communicates with an external device via RS232C.
Network	Communicates with an external device via a network.
Off	Does not communicate with external device.

Quick Start Mode

On	Shortens the startup time when turning on the player.
Off	The default setting.

When "Quick Start Mode" is set to "On,"
– power consumption will be higher than when "Quick Start Mode" is set to "Off" and
– the ventilation fan may turn on depending on the surrounding temperature.

Auto Standby

The player automatically turns off if you do not press any of the buttons on the player or remote for more than 30 minutes, unless you are playing BDs/DVDs/CDs/photo files or are updating software.

On	Turns on the "Auto Standby" function.
Off	Turns off the function.

Auto Display

On	Automatically displays information on the screen when changing the viewing titles, picture modes, audio signals, etc.
Off	Displays information only when you press DISPLAY.

Screen Saver

The screen saver image appears when you do not use the player for more than 15 minutes while an on-screen display, such as the home menu, is displayed on your TV screen. The screen saver image helps prevent your display device from becoming damaged (ghosting).

On	Turns on the screen saver function.
Off	Turns off the function.

Command Mode

Changes the command mode of the player if other equipment is assigned the same command mode. Change the command mode of the supplied remote to match the player. For details, see "Changing the Command Mode" (page 62).

BD1	The default command mode of the player.
BD2	Select this if the default command mode conflicts with other equipment.
BD3	Select this if the default command mode conflicts with other equipment.

Software Update Notification

Informs you of newer software version information. Network connections and settings are required when using this function (page 78).

On	Sets the player to inform you of newer software version information (page 64).
Off	Turns off the function.

Child Lock

You can lock the front cover to prevent it being opened by mistake.

On	Locks the front cover.
Off	Unlocks the front cover.

Accessing Gracenote

When loading the disc, you can acquire disc information from the Gracenote Database. Network connections and settings are required when using this function (page 78).

On	Accesses the Gracenote Database.
Off	Does not access the Gracenote Database.

System Information

Displays the player's software version information and the MAC address.

Network Settings

Internet Settings

These items are necessary when you connect to the Internet via a network cable. Enter the respective (alphanumeric) values for your broadband router or Wireless LAN router. The items that need to be set may differ, depending on the Internet service provider or the router. For details, refer to the instruction manuals that have been provided by your Internet service provider or supplied with the router.

1 Select "Internet Settings" in "Network Settings," and press ⊕.

2 Select "IP Address Acquisition," and press ⊕.

3 Select an item, and press ⊕.

Use DHCP	Select this when DHCP (Dynamic Host Configuration Protocol) server settings are available from your Internet service provider. The network settings necessary for the player will be assigned automatically.
Use Static IP Address	Set the IP address manually according to your network environment.

- When you select "Use DHCP"
  If you set "DNS Server Auto Acquisition" to "Off," set the following item:
  – DNS Server (Primary)/DNS Server (Secondary)
- When you select "Use Static IP Address"
  Set the following items:
  – IP Address
  – Subnet Mask
  – Default Gateway
  – DNS Server (Primary)/DNS Server (Secondary)

When you set the “DNS Server (Primary)”/“DNS Server (Secondary)” addresses manually, enter the “DNS Server (Primary)” address. Otherwise, the “Internet Settings” will be set incorrectly.

4 If your ISP has a specific proxy server setting, select “Proxy Settings” using ↑/↓, and press ⊕.

The “Proxy Settings” display appears. If the proxy server does not have a specific setting, go to step 8.

5 Set “Use of Proxy Server” to “On.”

6 Select “Proxy Server” and “Port,” and enter the settings.

To enter the proxy server, see “Entering characters” (page 54).

7 Press RETURN.

8 Select “Network Diagnostic” using ↑/↓, and press ⊕.

9 Select “Start,” and press ⊕.

10 Check that the message “Network connections are correct.” appears.

The setup is finished. If the message does not appear, follow the on-screen messages.

1·2·3 Easy Setup

Re-runs Easy Setup to make the basic settings.

1 Select “Easy Setup,” and press ⊕.

2 Select “Start” using ←/→, and press ⊕.

3 Follow the instructions for “Step 7: Easy Setup” (page 31) from step 4.

Resetting

You can return a specific group of player settings to their factory defaults. All the settings within the group will be reset.

1 **Select “Resetting,” and press ⊕.**

2 **Select “Reset to Factory Default Settings,” and press ⊕.**

3 **Select the settings you want to reset to default, and press ⊕.**

The display asks for confirmation.
You can reset the following settings:
– Video Settings
– Audio Settings
– BD/DVD Viewing Settings
– Photo Settings
– System Settings
– Network Settings
– All Settings

4 **Select “Start” using ←/→, and press ⊕.**

- When “All Settings” is selected in step 3,
  – all settings within (Setup) are reset.
  – “A/V Settings” that can be adjusted by pressing OPTIONS during playback (page 38) are not reset.
- The password for “BD Parental Control” or “DVD Parental Control” in “BD/DVD Viewing Settings” (page 73) is not reset.

Additional Information

Troubleshooting

If you experience any of the following difficulties while using the player, use this troubleshooting guide to help remedy the problem before requesting repairs. Should any problem persist, consult your nearest Sony dealer.

Power

The power does not turn on.

➡ Check that the mains lead (AC power cord) is connected securely.

➡ It takes a short while before the player turns on.

The message "A new software version has been found online. Perform version update?" appears on the screen when turning the player on.

➡ See "Network Update" (page 64) to update the player to a newer software version.

When turning the player on, ⚠ appears on the screen, and "SYSTEM ERROR" appears in the front panel display.

➡ Disconnect the mains lead (AC power cord) and wait for a while, then re-connect the mains lead (AC power cord). If the condition persists, contact your nearest Sony dealer or local authorized Sony service facility.

Disc

The disc does not play.

➡ The disc is dirty.

➡ The disc is reversed. Insert the disc with the playback side facing left.

➡ The disc is skewed.

➡ You are attempting to play a disc with a format that cannot be played back by this player (page 87).

➡ The region code on the BD or DVD does not match the player.

➡ The player cannot play a recorded disc that is not correctly finalised (page 87).

➡*continued*

➡ Disc playback is limited according to user age. To change the restriction, you need the "BD Parental Control" or "DVD Parental Control" password in "BD/DVD Viewing Settings" (page 73). Keep a note of your password. The password is not reset even if you reset the player (page 80). If you forget the password, contact our Customer Information Service Centre.

Picture

See also "Connecting to an HDMI jack" (page 19) when connecting equipment using an HDMI cable.

There is no picture/picture noise appears.

➡ Check that all the connecting cables are securely connected.
➡ Check whether the connecting cables are damaged.
➡ Check the connection to your TV (page 18) and switch the input selector on your TV so that the signal from the player appears on the TV screen.
➡ When playing a double-layer BD/DVD, the video and audio may be momentarily interrupted at the point where the layers switch.

No picture appears when the video output resolution selected in "Output Video Format" is incorrect.

➡ Press ■ on the player for more than 10 seconds to reset the video output resolution to the lowest resolution.

The picture does not fill the screen, even though the aspect ratio is set in "DVD Aspect Ratio" under "Video Settings."

➡ The aspect ratio of the disc is fixed on your DVD (page 66).

Video signals are not output from the jacks, other than from the HDMI OUT jack, when connecting the HDMI OUT jack and other video output jacks at the same time.

➡ Set "Output Video Format" to "Component Video" in the "Video Settings" setup (page 66).

The dark area of the picture is too dark/the bright area is too bright or unnatural.

➡ Set "Picture Quality Mode" to "Standard" (default) (see "Adjusting picture and sound for videos" on page 41).

The picture is not output correctly.

➡ Check the "Output Video Format" settings in the "Video Settings" setup (page 66).

No BD-ROM picture appears.

➡ Check the "BD-ROM 1080/24p Output" setting in the "Video Settings" setup (page 67).

Sound

See also "Connecting to an HDMI jack" (page 24) when connecting equipment using an HDMI cable.

There is no sound.

➡ Check that all the connecting cables are securely connected.
➡ Check whether the connecting cables are damaged.
➡ Check the connection to your AV amplifier (receiver) (page 23) and switch the input selector on your AV amplifier (receiver) so that the audio signals of the player are output from your AV amplifier (receiver).
➡ The player is in scan mode.
➡ If the audio signal does not come through the DIGITAL OUT (OPTICAL/COAXIAL)/HDMI OUT jack, check the audio settings (page 69).

The sound is not output correctly.

➡ Check the "Audio Output Priority" setting in the "Audio Settings" setup (page 69).
➡ Check the speaker settings (page 69).

The volume is low.

➡ The volume is low on some BDs or DVDs.
➡ Try setting "Audio DRC" to "TV Mode" in the "Audio Settings" setup (page 72).
➡ Set "Audio ATT" to "Off" in the "Audio Settings" setup (page 72).

The HD Audio (Dolby Digital Plus, Dolby TrueHD, DTS-HD High Resolution Audio, and DTS-HD Master Audio) is not output by bitstream.

➡ Set "BD Audio Setting" to "Direct" in the "Audio Settings" setup (page 71).

➡ Check that the connected AV amplifier (receiver) is compatible with each HD Audio format.

The interactive audio is not output.

➡ Set "BD Audio Setting" to "Mix" in the "Audio Settings" setup (page 71).

HDMI

There is no picture or no sound when connected to the HDMI OUT jack.

➡ Try the following: ①Turn the player off and on again. ②Turn the connected equipment off and on again. ③Disconnect and then reconnect an HDMI cable.

There is no picture or picture noise appears when connected to the HDMI OUT jack.

➡ The HDMI OUT jack is connected to a DVI device that does not support copyright protection technology.

➡ If the HDMI OUT jack is used for video output, changing the video output resolution may solve the problem (page 66).

No sound is output from the HDMI OUT jack.

➡ The HDMI OUT jack is connected to a DVI device (DVI jacks do not accept audio signals).

The sound is not output correctly when connected to the HDMI OUT jack.

➡ The device connected to the HDMI OUT jack does not support the audio format of the player. Check the audio settings (page 69).

The display language on the screen switches automatically when connected to the HDMI OUT jack.

➡ When "Control for HDMI" is set to "On" (page 76), the display language on the screen automatically switches according to the language setting of the connected TV (if you change the setting on your TV, etc.).

The "Control for HDMI" function does not work (BRAVIA Sync).

➡ Check that the mains lead (AC power cord) of the connected component is securely connected.

➡ If the HDMI indicator does not appear in the front panel display, check the HDMI connection (page 19, 24).

➡ Set "Control for HDMI" to "On" (page 76).

➡ Make sure that the connected component is compatible with the "Control for HDMI" function. For details, refer to the operating instructions supplied with the component.

➡ Check the connected component's setting for the "Control for HDMI" function. For details, refer to the operating instructions supplied with the component.

➡ If you change the HDMI connection, turn the player off and on again.

➡ If power failure occurs, set "Control for HDMI" to "Off," then set "Control for HDMI" to "On" (page 76).

➡ For details on the "Control for HDMI" function, see "About the BRAVIA Sync Features (HDMI connections only)" (page 56).

➡ If you connect the player to a TV through an AV amplifier (receiver) that is not compatible with the "Control for HDMI" function, you may be unable to control the TV from the player.

External memory (local storage)

The external memory is not recognised.

➡ Try the following: ①Turn the player off. ②Align the ▼ mark of the EXT slot with the ▼ mark on the external memory (in case of USM1GH/USM2GH), and insert the external memory. ③Turn the player on. ④Check that the EXT indicator lights up in the front panel display.

➡continued

Bonus contents or other data that are contained in a BD-ROM cannot be played.

➡ Try the following: ①Remove the disc. ②Turn the player off. ③Remove and re-insert the external memory (page 28). ④Turn the player on. ⑤Check that the EXT indicator lights up in the front panel display. ⑥Insert the BD-ROM with BonusView/BD-Live.

A message indicating that the local storage does not have enough space appears on the screen.

➡ Delete unnecessary data in the external memory (page 40).

Operation

The remote does not function.

➡ The batteries in the remote are weak (page 31).

➡ The distance between the remote and the player is too far.

➡ The remote is not pointed at the remote sensor on the player.

➡ Different command modes are set for the player and remote. Set the same command mode (page 62).

The file name is not correctly displayed.

➡ The player can only display ISO 8859-1-compliant character formats. Other character formats may be displayed differently.

➡ Depending on the writing software used, the input characters may be displayed differently.

The disc does not start playing from the beginning.

➡ Resume Play is on (page 38).

Some functions such as Stop or Search cannot be performed.

➡ Depending on the disc, you may not be able to do some of the operations above. Refer to the operating manual supplied with the disc.

The language for the soundtrack/subtitle or angles cannot be changed.

➡ Try using the BD's or DVD's menu instead of the direct selection button on the remote (page 39).

➡ Multi-lingual tracks/subtitles or multi-angles are not recorded on the BD or DVD being played.

➡ The BD or DVD prohibits the changing of the language for the sound track/subtitle or angles.

The front cover does not open and "LOCKED" appears in the front panel display.

➡ When "LOCKED" appears, the player is locked. To cancel the Child Lock, hold down ■■ on the player until "UNLOCK" appears in the front panel display (page 10).

The player does not respond to any button.

➡ Moisture has condensed inside the player (page 3).

➡ Hold down I/⏻ on the player for more than 10 seconds until the indicators in the front panel display turn off.
If the player still does not respond to any button, disconnect then reconnect the mains lead (AC power cord).

Self-Diagnosis Function

When the self-diagnosis function is activated to prevent the player from malfunctioning, an error code appears in the front panel display, or just ⚠ appears without any messages on the entire screen.
In these cases, check the following.

When an error code appears in the front panel display

Error code	Corrective action
Exxxx SYS ERR	Contact your nearest Sony dealer or local authorized Sony service facility and give the error code. "xxxx" represents an error code (number).
FAN ERR	• Check that the ventilation holes on the rear of the player are not blocked. • Place the player in a location with adequate ventilation to prevent heat build-up in the player.

When just ⚠ appears without any messages on the entire screen

Depending on the situation, the remedy in "Power" of "Troubleshooting" (page 81) may solve the problem. If any problem persists, contact your nearest Sony dealer or local authorized Sony service facility.

Playable Discs

Type	Disc Logo	Icon used in this manual	Characteristics
Blu-ray Disc		BD	BD-ROMs and BD-REs/BD-Rs in BDMV and BDAV mode, and DL discs
DVD VIDEO		DVD	Discs such as movies that can be purchased or rented
DVD		DVD	DVD+RWs/DVD+Rs in +VR mode or DVD-RWs/DVD-Rs in video and VR mode, and DVD+R DL/DVD-R DL discs
DATA DVD		DATA DVD	DVD+RWs/DVD+Rs/DVD-RWs/ DVD-Rs containing MP3[*1] audio tracks and JPEG[*2] image files
CD		CD	Music CDs or CD-Rs/CD-RWs in music CD format
DATA CD	—	DATA CD	CD-Rs/CD-RWs containing MP3[*1] audio tracks and JPEG[*2] image files

[*1] MPEG Layer-3 audio coding technology and patents licensed from Fraunhofer IIS and Thomson.

[*2] JPEG format conforming to UDF (Universal Disk Format).

Notes about BD-ROM compatibility

Since the Blu-ray Disc specifications are new and evolving, some discs may not be playable depending on the disc type and the version. The audio output differs depending on the source, connected output jack, and selected audio settings. For details, see page 89.

Discs that cannot be played

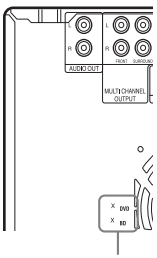
- BDs with cartridge
- DVD-RAMs
- HD DVDs
- DVD Audio discs
- PHOTO CDs
- Data part of CD-Extras
- VCDs/Super VCDs
- HD layer on Super Audio CDs
- DualDiscs
- BD-ROMs/DVD VIDEOs with a different region code (page 87).
- 8cm discs

Note on playback operations of BDs/DVDs

Some playback operations of BDs/DVDs may be intentionally set by software producers. Since this player plays BDs/DVDs according to the disc contents the software producers designed, some playback features may not be available. Refer to the instructions supplied with the BDs/DVDs.

Region code (BD-ROM/DVD VIDEO only)

Your player has a region code printed on the rear of the unit and will only play BD-ROMs/DVD VIDEOs (playback only) labelled with identical region codes. This system is used to protect copyrights.
DVD VIDEOs labelled (ALL) will also play on this player.
Depending on the BD-ROM/DVD VIDEO, no region code may be indicated even though playing the BD-ROM/DVD VIDEO is prohibited by area restrictions.



Region code

- **Notes about BD-REs/BD-Rs, DVD+RWs/DVD+Rs, DVD-RWs/DVD-Rs, or CD-Rs/CD-RWs**
  Some BD-REs/BD-Rs, DVD+RWs/DVD+Rs, DVD-RWs/DVD-Rs, or CD-Rs/CD-RWs cannot be played on this player due to the recording quality or physical condition of the disc, or the characteristics of the recording device and authoring software.
  A CD or DVD disc will not play if it has not been correctly finalised. For more information, refer to the operating instructions supplied with the recording device. Note that some playback functions may not work with some DVD+RWs/DVD+Rs, even if they have been correctly finalised. In this case, view the disc using normal playback.
- **Music discs encoded with copyright protection technologies**
  This product is designed to play back discs that conform to the Compact Disc (CD) standard. Various music discs encoded with copyright protection technologies are being marketed by some record companies. Please be aware that among those discs, there are some that do not conform to the CD standard and may not be playable by this product.
- **Note on DualDiscs**
  Using a DualDisc with this product may scratch or abrade the surface of the video side of the DualDisc and affect its playability and should not be used with this product.
- **Note about double-layer BDs/DVDs**
  The playback pictures and sound may be momentarily interrupted when the layers switch.
- **Note about BD-REs/BD-Rs**
  This player supports Ver. 2.1 BD-RE and Ver. 1.1 and 1.2 BD-R including organic pigment type BD-R (LTH type).
- **Note about DTS 5.1 MUSIC DISCs**
  This player can play DTS 5.1 MUSIC DISCs. Audio signals are output in the formats specified under the “Audio Output Signals” table on page 89.

Video Output Resolution

Output resolution differs depending on the “Output Video Format” setting in the “Video Settings” setup (page 65).

Resolution setting	When “Output Video Format” is set to “HDMI”			When “Output Video Format” is set to “Component Video”		
	VIDEO OUT VIDEO/ S VIDEO jack	COMPONENT VIDEO jack	HDMI OUT jack	VIDEO OUT VIDEO/ S VIDEO jack	COMPONENT VIDEO jack	HDMI OUT jack
480i/576i	480i/576i	480i/576i	480i/576i	480i/576i	480i/576i	480i/576i
480p/576p	480i/576i	480i/576i	480p/576p	480i/576i	480p/576p	480p/576p
720p	480i/576i	480i/576i	720p	480i/576i	720p[*1]	720p[*1]
1080i	480i/576i	480i/576i	1080i	480i/576i	1080i[*1]	1080i[*1]
1080p	480i/576i[*2]	480i/576i[*2]	1080p	unavailable	unavailable	unavailable

[*1] Protected contents on DVDs are output at 480p/576p resolution.

[*2] No picture appears when outputting at 1080/24p resolution.

◆When “Output Video Format” is set to “Video or S Video”

480i/576i video signals are output from the VIDEO OUT VIDEO/S VIDEO or COMPONENT VIDEO jack, and 480p/576p video signals are output from the HDMI OUT jack.

Audio Output Signals

The audio output differs as follows, depending on the source, output jack, and the selected settings.

Disc/source \ Jacks/settings[*1]		Digital				Analogue	
		HDMI OUT jack[*2]		DIGITAL OUT (OPTICAL/COAXIAL) jacks[*2]		MULTI CHANNEL OUTPUT jacks[*2]	AUDIO OUT (L/R) jacks
		Auto[*3]	2ch PCM[*3]	Bitstream[*4]	PCM		
BD	LPCM 2ch	LPCM 2ch	LPCM 2ch	LPCM 2ch	LPCM 2ch	2ch	2ch
	LPCM 5.1ch	LPCM 5.1ch	LPCM 2ch	LPCM 2ch	LPCM 2ch	5.1ch	2ch
	LPCM 7.1ch	LPCM 7.1ch	LPCM 2ch	LPCM 2ch	LPCM 2ch	7.1ch	2ch
	Dolby Digital	LPCM 5.1ch[*5]	LPCM 2ch	Dolby Digital/ LPCM 2ch[*6]	LPCM 2ch	5.1ch	2ch
	Dolby Digital Plus	LPCM 7.1ch[*5]	LPCM 2ch	Dolby Digital/ LPCM 2ch[*6]	LPCM 2ch	7.1ch	2ch
	Dolby TrueHD	LPCM 7.1ch[*5]	LPCM 2ch	Dolby Digital/ LPCM 2ch[*6]	LPCM 2ch	7.1ch	2ch
	DTS	LPCM 5.1ch[*5]	LPCM 2ch	DTS/ LPCM 2ch[*6]	LPCM 2ch	5.1ch	2ch
	DTS-HD High Resolution Audio	LPCM 7.1ch[*5]	LPCM 2ch	DTS/ LPCM 2ch[*6]	LPCM 2ch	7.1ch	2ch
	DTS-HD Master Audio	LPCM 7.1ch[*5]	LPCM 2ch	DTS/ LPCM 2ch[*6]	LPCM 2ch	7.1ch	2ch
DVD	LPCM	LPCM 2ch	LPCM 2ch	LPCM 2ch	LPCM 2ch	2ch	2ch
	Dolby Digital	Dolby Digital	LPCM 2ch	Dolby Digital	LPCM 2ch	5.1ch	2ch
	DTS	DTS	LPCM 2ch	DTS	LPCM 2ch	5.1ch	2ch
CD	LPCM	LPCM	LPCM 2ch	LPCM 2ch	LPCM 2ch	2ch	2ch
DTS 5.1 MUSIC DISC		DTS	LPCM 2ch	DTS	LPCM 2ch	5.1ch	2ch

[*1] When "Audio Output Priority" is set to "Stereo Analogue," LPCM 2ch signals are output from each jack.

[*2] When "Audio Output Priority" is set to "HDMI," "Coaxial/Optical" or "Multi Channel Analogue," LPCM 2ch signals are output from jacks other than the selected jack.

[*3] Auto: when "Audio (HDMI)" is set to "Auto" in the "Audio Settings" setup (page 71).
2ch PCM: when "Audio (HDMI)" is set to "2ch PCM" in the "Audio Settings" setup (page 71).

[*4] Bitstream: when "Dolby Digital" is set to "Dolby Digital" or "DTS" is set to "DTS" in the "Audio Settings" setup (page 72).

[*5] When "BD Audio Setting" is set to "Direct," audio recorded by the source is output by bitstream. However, this audio may be output as follows depending on the audio formats supported by the AV amplifier (receiver).
– When the AV amplifier (receiver) does not support HD Audio (Dolby Digital Plus, Dolby TrueHD, DTS-HD High Resolution Audio and DTS-HD Master Audio) but supports Multi-ch LPCM, up to LPCM 7.1ch is output.
– When the AV amplifier (receiver) does not support HD Audio or Multi-ch LPCM but supports Dolby Digital/DTS, a Dolby Digital or DTS bitstream is output.
– When the AV amplifier (receiver) does not support HD Audio, Multi-ch LPCM or Dolby Digital/DTS, LPCM 2ch is output.

[*6] The 2-channel or less-channel primary/secondary audio signals are output as LPCM 2ch signals.

When outputting 480i/480p video signals from the HDMI OUT jack, Dolby TrueHD and DTS-HD Master Audio are output as LPCM, Dolby Digital, or DTS bitstream signals even if "BD Audio Setting" is set to "Direct" in the "Audio Settings" setup (page 71).

Specifications

System

Laser: Semiconductor laser

Outputs

(**Jack name:**
Jack type/Output level/Load impedance)

Analogue Audio Output:
Stereo Output: Phono jack/2 Vrms/
10 kilohms
Multi Channel Output: Phono jack/2 Vrms/
10 kilohms

Digital Audio Output:
Optical Output: Optical output jack/
–18 dBm (wave length 660 nm)
Coaxial Output: Phono jack/0.5 Vp-p/
75 ohms

Analogue Video Output
Component Output (Y/PB/PR): Phono jack/
Y: 1.0 Vp-p/PB, PR: 0.7 Vp-p/75 ohms
Composite Output: Phono jack/1.0 Vp-p/
75 ohms
S-Video Output: 4-pin mini DIN/Y:
1.0 Vp-p, C: 0.286 Vp-p/75 ohms

HDMI Output
HDMI 19-pin standard connector

LAN (100):
100BASE-TX Terminal

EXT:
External memory slot (For connecting the external memory)
DC output: 5 V 500 mA Max

CONTROL S IN / IR IN:
Mini jack

RS232C port:
D-sub 9-pin

General

Power requirements:
230 V AC, 50/60 Hz

Power consumption:
36 W
Standby: 0.3 W (at the Power Saving mode)

Dimensions (approx.):
430 mm × 240 mm × 555 mm
(width/height/depth) incl. projecting parts

Mass (approx.):
14.2 kg

Operating temperature:
5 ºC to 35 ºC

Operating humidity:
25 % to 80 %

Supplied accessories

See page 17.

Specifications and design are subject to change without notice.

- Standby power consumption 0.3 W.
- Halogenated flame retardants are not used in the certain printed wiring boards.

Language Code List

For details, see page 73.
The language spellings conform to the ISO 639: 1988 (E/F) standard.

Number	Language
1027	Afar
1028	Abkhazian
1032	Afrikaans
1039	Amharic
1044	Arabic
1045	Assamese
1051	Aymara
1052	Azerbaijani
1053	Bashkir
1057	Byelorussian
1059	Bulgarian
1060	Bihari
1061	Bislama
1066	Bengali
1067	Tibetan
1070	Breton
1079	Catalan
1093	Corsican
1097	Czech
1103	Welsh
1105	Danish
1109	German
1130	Bhutani; Dzongkha
1142	Greek
1144	English
1145	Esperanto
1149	Spanish
1150	Estonian
1151	Basque
1157	Persian
1165	Finnish
1166	Fiji
1171	Faroese
1174	French
1181	Frisian
1183	Irish
1186	Scots Gaelic
1194	Galician
1196	Guarani
1203	Gujarati
1209	Hausa
1217	Hindi
1226	Croatian
1229	Hungarian
1233	Armenian
1235	Interlingua
1239	Interlingue
1245	Inupiak
1248	Indonesian
1253	Icelandic
1254	Italian
1257	Hebrew
1261	Japanese
1269	Yiddish
1283	Javanese
1287	Georgian
1297	Kazakh
1298	Greenlandic; Kalaallisut
1299	Cambodian; Khmer
1300	Kannada
1301	Korean
1305	Kashmiri
1307	Kurdish
1311	Kirghiz
1313	Latin
1326	Lingala
1327	Laothian; Lao
1332	Lithuanian
1334	Latvian
1345	Malagasy
1347	Maori
1349	Macedonian
1350	Malayalam
1352	Mongolian
1353	Moldavian
1356	Marathi
1357	Malay
1358	Malese; Maltese
1363	Burmese
1365	Nauru
1369	Nepali
1376	Dutch
1379	Norwegian
1393	Occitan
1403	Oromo
1408	Oriya
1417	Punjabi; Panjabi
1428	Polish
1435	Pashto; Pushto
1436	Portuguese
1463	Quechua
1481	Rhaeto-Romance
1482	Kirundi; Rundi
1483	Romanian
1489	Russian
1491	Kinyarwanda
1495	Sanskrit
1498	Sindhi
1501	Sangho; Sango
1502	Serbo-Croatian
1503	Singhalese; Sinhalese
1505	Slovak
1506	Slovenian
1507	Samoan
1508	Shona
1509	Somali
1511	Albanian
1512	Serbian
1513	Siswati; Swati
1514	Sesotho; Sotho southern
1515	Sundanese
1516	Swedish
1517	Swahili
1521	Tamil
1525	Telugu
1527	Tajik
1528	Thai
1529	Tigrinya
1531	Turkmen
1532	Tagalog
1534	Setswana; Tswana
1535	Tonga; Tonga islands
1538	Turkish
1539	Tsonga
1540	Tatar
1543	Twi
1557	Ukrainian
1564	Urdu
1572	Uzbek
1581	Vietnamese
1587	Volapük
1613	Wolof
1632	Xhosa
1665	Yoruba
1684	Chinese
1697	Zulu
1703	not specified

Parental Control/Area Code

For details, see page 73.

Number, Area (Code)		
2044, Argentina (ar)	2200, Greece (gr)	2379, Norway (no)
2047, Australia (au)	2219, Hong Kong (hk)	2427, Pakistan (pk)
2046, Austria (at)	2248, India (in)	2424, Philippines (ph)
2057, Belgium (be)	2238, Indonesia (id)	2428, Poland (pl)
2070, Brazil (br)	2239, Ireland (ie)	2436, Portugal (pt)
2079, Canada (ca)	2254, Italy (it)	2489, Russia (ru)
2090, Chile (cl)	2276, Japan (jp)	2501, Singapore (sg)
2092, China (cn)	2304, Korea (kr)	2149, Spain (es)
2093, Colombia (co)	2333, Luxembourg (lu)	2499, Sweden (se)
2115, Denmark (dk)	2363, Malaysia (my)	2086, Switzerland (ch)
2165, Finland (fi)	2362, Mexico (mx)	2543, Taiwan (tw)
2174, France (fr)	2376, Netherlands (nl)	2528, Thailand (th)
2109, Germany (de)	2390, New Zealand (nz)	2184, United Kingdom (gb)

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When the automatic update functionality described in the previous paragraph is activated, it is assumed that you agree (a) that the Software will be automatically updated as necessary to improve security functionality, to correct errors, to improve update functionality, or for other purposes, and (b) that this updating of the Software may be accompanied by the augmenting, modifying, or removing of functionality of the Software.

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Glossary

AACS
"Advanced Access Content System" is a specification for managing digital entertainment contents stored on the next generation of prerecorded and recorded optical media. The specification enables consumers to enjoy digital entertainment content, including high-definition content.

BD-J application
The BD-ROM format supports Java for interactive functions.
"BD-J" offers content providers almost unlimited functionality when creating interactive BD-ROM titles.

BD-R (page 86)
BD-R (Blu-ray Disc Recordable) is a recordable, write-once Blu-ray Disc, available in the same capacities as the BD below. Since contents can be recorded and cannot be overwritten, a BD-R can be used to archive valuable data or storing and distributing video material.

BD-RE (page 86)
BD-RE (Blu-ray Disc Rewritable) is a recordable and rewritable Blu-ray Disc, available in the same capacities as the BD below. The re-recordable feature makes extensive editing and time-shifting applications possible.

BD-ROM (page 86)
BD-ROMs (Blu-ray Disc Read-Only Memory) are commercially produced discs and are available in the same capacities as the BD below. Other than conventional movie and video contents, these discs have enhanced features such as interactive content, menu operations using pop-up menus, selection of subtitle display, and slideshow. Although a BD-ROM may contain any form of data, most BD-ROM discs will contain movies in High Definition format, for playback on Blu-ray Disc/DVD players.

Blu-ray Disc (BD) (page 86)
A disc format developed for recording/playing high-definition (HD) video (for HDTV, etc.), and for storing large amounts of data. A single layer Blu-ray Disc holds up to 25 GB, and a dual-layer Blu-ray Disc holds up to 50 GB of data.

Deep Colour (page 68)
These are video signals for which the colour depth of signals passing through an HDMI jack have been enhanced. With a Non-Deep Colour-compatible player, the number of colours 1 pixel can express is 24 bits (16,777,216 colours). However, with a Deep Colour-compatible player, 1 pixel can express more bits, such as 36 bits. With more bits, the gradation of colour depth can be expressed more finely, and continuous colour changes will be displayed more smoothly.

Dolby Digital Plus (page 89)
Developed as an extension to Dolby Digital, the audio coding technology supports 7.1 multi-channel surround sound.

Dolby TrueHD (page 89)
Dolby TrueHD is a lossless coding technology that supports up to 8 channels of multi-channel surround sound for the next generation optical discs. The reproduced sound is true to the original source bit-for-bit.

DTS (page 89)
Digital audio compression technology that DTS, Inc. developed. This technology conforms to multi-channel surround sound. The rear channel is stereo and there is a discrete subwoofer channel in this format. DTS provides the same discrete channels of high quality digital audio.
Good channel separation is realized because all of the channel data is recorded discretely and little deterioration occurs because all channel data processing is digital.

DTS-HD High Resolution Audio (page 89)
Developed as an extension to DTS Digital Surround format. It supports a maximum sampling frequency of 96 kHz, and 7.1 multi-channel surround.
DTS-HD High Resolution Audio has a maximum transmission rate of 6 Mbps, with lossy compression (Lossy).

➡continued

DTS-HD Master Audio (page 89)

DTS-HD Master Audio has a maximum transmission rate of 24.5 Mbps, and uses lossless compression (Lossless), and DTS-HD Master Audio corresponds to a maximum sampling frequency of 192 kHz, and maximum of 7.1ch.

HDMI (High-Definition Multimedia Interface) (page 19)

HDMI is an interface that supports both video and audio on a single digital connection. The HDMI connection carries standard- to high-definition video signals and multi-channel audio signals to AV components such as HDMI equipped TVs, in digital form without degradation.
The HDMI specification supports HDCP (High-bandwidth Digital Contents Protection), a copy protection technology for digital entertainment contents for HDMI.

HD Reality Enhancer (page 42, 49)

Sony-developed technology provides real-time parsing pixel-by-pixel, performs optimum smoothing, clarifies details, removes noise and achieves smoother gradation in video signals during playback.

LPCM (Linear PCM) (page 89)

A digital audio format that does not cause deterioration in data compression and expansion.

LTH (Low to High) (page 87)

LTH is a recording system that supports organic pigment type BD-R.

PhotoTV HD (page 50)

"PhotoTV HD" allows for a highly-detailed pictures, and photo-like expression of subtle textures and colours. By connecting Sony "PhotoTV HD" compatible devices using an HDMI cable, whole new world of photos can be enjoyed in breathtaking Full HD quality. For instance, the delicate texture of the human skin, flowers, sand and waves can now be displayed on a large screen in beautiful photo-like quality.

Pop-up menu (page 39)

An enhanced menu operation available on BD-ROMs. The pop-up menu appears when POP UP/MENU is pressed during playback, and can be operated while playback is in progress.

Super Bit Mapping (page 68)

It is possible to achieve smoother gradation by putting 14 bits of information into an 8-bit video signal. This Sony-developed technology takes into account human vision characteristics.

x.v.Colour (page 68)

x.v.Colour is a familiar term for the xvYCC standard proposed by Sony.
xvYCC is an international standard for Colour space in video.
This standard can express a wider colour range than the currently used broadcast standard.

24p True Cinema (page 67)

Movies shot with a film camera consist of 24 frames per second.
Since conventional televisions (both CRT and flat panels) display frames either at 1/60 or 1/50 second intervals, the 24 frames do not appear at an even pace.
When connected to a TV with 24p capabilities, the player displays each frame at 1/24 second intervals — the same interval originally shot with the film camera, thus faithfully reproducing the original cinema image.

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